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BIRDS

BLUEBIRD (Male)

THRUSH

Parents' Institute Edition

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BIRDS

SELECTED FROM THE WRITINGS OF

NELTJE BLANCHAN

"Bird Neighbors," "Birds that Hunt and are Hunted" (Game Birds), "How to Attract the Birds," "Birds Every Child Should Know"

FORTY-EIGHT ILLUSTRATIONS IN FULL COLOR

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PREFACE

As SEVERAL hundred thousand readers have been kind enough to approve the author's four previous volumes on birds, it has been suggested that a single volume might be helpful, dealing with the birds most worth knowing and chosen by the author from these writings with the view of interesting an ever-widening circle of new friends in the most appealing form of wild life there is still left about us.

An immense wave of interest in birds recently swept over the country where less than a generation ago was complete indifference to their extermination. Why this change of the people's thought? Largely as the logical result of persistent and highly intelligent educative work by the Audubon Societies, directed by scientific and altruistic men and women, in reaching school children, clubs of many kinds, granges, editors, and legislators. Vast quantities of well-written pamphlets and beautiful colored pictures, such as are used to illustrate this book, are distributed annually; bird clubs are actively at work all over the country; Junior Audubon classes graduate fresh recruits; wardens are safeguarding the breeding grounds of the egret, gull, tern, eider, and other birds dangerously near the vanishing point; bird sanctuaries have been established in countless parks, cemeteries, private estates, and public domains; the making of bird houses, fountains, and restaurants has suddenly become a well-advertised business as well as a pastime for every boy and girl who can handle a hammer; people are

planting trees, shrubs, and vines especially to attract birds and they systematically feed them all winter; Audubon field agents are lecturing, disseminating literature, buttonholing legislators, and looking out for the birds' interests generally in State and National Capitols, interests now backed up by intelligent public opinion so strong as to make the ultimate passage of protective laws in every state of the Union a foregone conclusion.

The National Conscience was awakened by the demonstration of the birds' vast economic value to the country; and with the wide-spread interest now taken in birds as important factors in our agricultural wealth comes a more lively interest in them as neighbors. Indeed a more sane and healthful and sympathetic view of all Nature follows an introduction to the birds that play so important and delightful a rôle in the great moving picture constantly unrolling its scroll before our eyes. Every one should join the National Association of Audubon Societies not only because there are still some sections of this big country where plucked robins are sold on skewers in the markets, but because there is to-day no American who, consciously or unconsciously, is not already in the Society's debt.

NELTJE BLANCHAN.

Oyster Bay, Long Island, N. Y.

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BIRDS

BIRDS

CHAPTER I

WHAT BIRDS DO FOR US

In the quite sudden popular interest in nature recently manifest, birds have come in for perhaps the lion's share of attention. Unlike most movements, this is an absolutely new one in the history of the world, not a revival. One might have thought that so intensely practical a people as the Americans would have taken up economic ornithology first of all, have learned with scientific certainty which birds are too destructive for survival and which so valuable that every measure ought to be taken to preserve and increase them. In reality, this has been the last aspect of the subject to receive attention. First came the classifiers—Wilson, Audubon, Baird, and Nuttall—the pioneers in systematic bird study. Thoreau was as a voice crying in the wilderness. His books lay in piles on the attic floor, unsold many years after his death. It remained for John Burroughs to awaken the popular enthusiasm for out-of-door life generally and for birds particularly, which is one of the signs of our times.

Among the first acts passed in the Colonies were bounty laws, not only offering rewards for the heads of certain birds that were condemned without fair trial, but imposing fixed

fines upon the farmer who did not kill his quota each year. Of course every man and boy carried a gun. The bounty system did much to foster the popular notion that everything in feathers is a legitimate target. Thus it is that

> "The evil that *birds* do lives after them;
> The good is oft interred with their bones."

For two centuries and a half this systematic destruction of birds, which blundered ignorantly along in every colony, state, and territory, resulted in a loss to our agriculture whose colossal aggregate would "stagger humanity" if, indeed, our minds could grasp the estimated figures in dollars and cents. Men now living among us were absolutely the first to study the food of any one species of bird through an entire year and in various sections of the country, and to pass scientific judgment upon it only after laboratory tests of the contents of its stomach —that final court of appeal. Through pressure brought to bear upon Congress by the American Ornithologists' Union, the Department of Agriculture was authorized in 1885 to spend a ridiculously small sum to learn the positive economic value of birds to us, a branch of scientific research now included under the Division of Biological Survey. Until that year all the scientific work that was done in this line could have been recorded in a very small volume indeed.

A General Whitewashing

As might have been expected, when the white searchlight of science beats upon the birds, none, not even the crow, appears as black as he has been painted. Only a

few culprits among the hawks and owls, and only one little sinner not a bird of prey, stand convicted and condemned to die. When it came to a verdict on the English sparrow, after the most thorough and impartial trial any bird ever received, every thumb, alas! was turned down. But having proven itself fittest to survive in the struggle for existence after ages of competition with the birds of the Old World, being obedient to nature's great law, it will defy man's legislation to exterminate it. Toilers in our overpopulated cities, children of the slums, see at least one bird that is not afraid to live among them the year around.

One of the first good effects of the Government's scientific investigation of birds, and the consequent whitewashing of bird characters that ensued, was the withdrawal of bounties by many states. Pennsylvania, for instance, woke up to realize that her notorious "scalp act" had lost her farmers many millions of dollars through the ravages of field mice, because the wholesale slaughter of all hawks and owls, regardless of their food and habits, had been systematically encouraged. A little knowledge on the part of legislators, backed by an immense amount of popular ignorance and prejudice against all of the so-called birds of prey, proved to be a very dangerous thing. Even better than the withdrawal of bounties is the action taken by many states to protect the birds. Instead of laying stress upon only the apparent evil in nature, as undeveloped pagans did, we are at last putting the emphasis where it rightly belongs—upon the good.

The Partition of Appetites

Whoever takes any notice of the birds about us cannot fail to be impressed with the regulation of that department

of nature's housekeeping entrusted to them. The labor is so adjusted as to give to each class of birds duties as distinct as a cook's from a chambermaid's. One class of tireless workers is bidden to sweep the air and keep down the very small gauzy-winged pests such as mosquitoes, gnats, and midges. Swallows dart and skim above shallow water, fields, and marshes; purple martins circle about our gardens; swifts around the roofs of our houses, nighthawks and whippoorwills through the open country, all plying the air for hours at a time. Some, which fly with their mouths open, need not pause a moment for refreshments.

On distended upper branches, preferably dead ones, on fence rails, posts, roofs, gables, and other points of vantage where no foliage can impede their aerial sallies, sit kingbirds, pewees, phoebes, and kindred dusky, inconspicuous flycatchers, ready to launch off into the air the second an insect heaves in sight, snap it up with the click of a satisfied beak, then return to their favorite look-out and patiently wait for another. This class of birds keeps down the larger flying insects. For generations the kingbird has been condemned as a destroyer of bees. Rigid investigation proves that he eats very few indeed, and those mostly drones. On the contrary, he destroys immense numbers of robber-flies or bee-killers, one of the worst enemies the bee farmer has. The mere fact that the kingbird has been seen so commonly around apiaries was counted sufficient circumstantial evidence to condemn him in this land of liberty. But after a fair trial it was found that ninety per cent. of his food consists of insects chiefly injurious: robber-flies, horse-flies, rose chafers, clover weevils, grasshoppers, and orchard beetles among others.

The Care of Foliage

To such birds as haunt the terminal twigs of trees and shrubbery—the warbler tribe and the vireos, chiefly—was assigned the duty of cleaning the foliage on the ends of the branches, where many kinds of insects deposit their eggs that their young may have the freshest, tenderest leaves to feed upon. Some few warblers, in the great family, confine their labors to the ground and undergrowth, it is true, and a few others pick their living out of the trunks of trees, but they are the exceptions which prove the rule. Countless millions of larvae, plant lice, ants, cankerworms, leaf-hoppers, flies, and the smaller caterpillars go to supply the tireless energy of these charming little visitors each time they migrate through our neighborhood. Generally speaking, the vireos, or greenlets, are less nervous and more deliberate and thorough in their search than the warblers. Cocking their heads to one side, they scrutinize the under half of the leaves where insects have sought protection from just such sharp eyes as theirs, as well as from rain and sun. After a warbler has snatched a hasty lunch in any given place, the vireo can follow him and find a square meal to be enjoyed at leisure.

But vireos and warblers, which are smaller than sparrows, however efficient as destroyers of the lesser insects, would be powerless to grapple with the larger pests found in the same places. Accordingly, another gang of larger feathered workers helps take care of the foliage for that most thorough of housekeepers, Dame Nature. Hidden among the foliage of trees and shrubbery, an immense army of feathered workers—many of our most beautiful birds and finest songsters among them—serve her with-

out hire, and during longer working hours than any trades union would allow. Thrushes, bluebirds, robins, mockingbirds, orioles, catbirds, thrashers, wrens, and tanagers —these and many others keep up a lively insect hunt throughout a long sojourn among us, coming when the first insects emerge in the spring and not wholly giving up the chase until the last die or become dormant with the coming of winter. What could a little warbler do with tent caterpillars, for example? But slim, large cuckoos glide among the leafy branches and count themselves lucky to enter a neighborhood infested by them. The sudden appearance of a new insect pest often attracts large numbers of birds not commonly seen in the neighborhood. If dead or mutilated larvae of tent caterpillars are seen near the torn tent it was probably opened by an oriole, for the cuckoo does his work more thoroughly, leaving no remains. The black-billed cuckoo has been an invaluable ally of the farmers in their herculean task of destroying the gypsy moth, an alarming pest which, although only recently introduced from Europe, has already laid waste large sections of New England. The stomach of a single yellow-billed cuckoo examined contained two hundred and seventeen fall web-worms! Hairs have been considered a means of protection adopted by many caterpillars. Most birds will not touch the hairy kind. But cuckoos are not so fastidious. The walls of their stomachs are sometimes as closely coated with hairs as a gentleman's beaver hat. Caterpillars are also the most important item on the Baltimore oriole's bill of fare, of which eighty-three per cent. is insect food gleaned among the foliage of trees. Click beetles, which infest every kind of cultivated plant, and their larvae, known as wireworms

destroy millions of dollars' worth of farm produce every year. Now, there are more than five hundred species of them in North America, and the oriole, which eats them as a staple and demolishes very many other kinds of beetles, wasps, bugs, plant-lice, craneflies, grasshoppers, locusts, and spiders, should win opinions as golden as his feathers for this benefaction alone. It has been said that were all the insects to perish, all the flowers would perish, too, which is not half so true as that were all the birds to perish men would speedily follow them. At the end of ten years the insects, unchecked, would have eaten every green thing off the earth!

The Birds That Have Charge of the Bark

For obvious reasons, then, many crawling insects hide themselves under the scaly bark of trees or in holes laboriously tunneled in decaying wood; others deposit their eggs in such secret places. When they die a natural death at the close of summer it is with the happy delusion that the next generation of their species, sleeping in embryo, is perfectly safe. But see how long it takes a woodpecker to eat a hundred insect eggs and empty a burrow of every grub in it! Inspecting each crevice where moth or beetle might lay her eggs, he works his way around a tree from bottom to top, now stopping to listen for the stirring of a borer under the smooth, innocent-looking bark, now tapping at a suspicious point and quickly drilling a hole where there is a prospect of heading off his victim. Using his bill as a chisel and mallet and his long tongue as a barbed spear to draw the grub from its nethermost hiding place, he lets nothing escape him. Boring beetles, tree-boring caterpillars, timber ants, and other insects which

are inaccessible to other birds, must yield their reluctant bodies to that merciless barbed tongue. Our little friend downy and the hairy woodpecker, the most beneficial members of the family, the flicker that descends to the ground to eat ants, the red-headed woodpecker that interperses his diet with grasshoppers, even the much-maligned sapsucker that pays for his intemperate drinks of freshly drawn sap by eating ants, grasshoppers, flies, wasps, bugs, and beetles—to these common woodpeckers and to their less neighborly kin, more than to any other agency, we owe the preservation of our timber from hordes of destructive insects.

But acknowledgment of this deep obligation must not cause us to overlook the nuthatches, brown creepers, chickadees, kinglets, and such other helpers that keep up quite as tireless a search for insects on the tree trunks and larger limbs as the more perfectly equipped woodpeckers. "In a single day a chickadee will sometimes eat more than four hundred eggs of the apple plant-louse," says Prof. Clarence Moores Weed, "while throughout the winter one will destroy an immense number of the eggs of the canker-worm."

Caretakers of the Ground Floor

Hidden in the grasses at the foot of the trees, among the undergrowth of woodland borders, under the carpet of last year's leaves, and buried in the ground itself, are insect enemies whose name is legion. Among the worst of them are the white grubs—the larvae of May beetles or June bugs—and the wireworms which attack the roots of grasses and the farmers' grain; the maggots of crane-flies which do their fatal work under cover of darkness in the soil; root-

and crown-borers which destroy annually fields of timothy, clover, and herd's-grass; grasshoppers, locusts, chinch bugs, cutworms, and army worms that have ruined crops enough to pay the national debt many times over.

But what a hungry feathered army rushes to their attack! And how much larger would that army have been if, in our blind stupidity or ignorance, we had not killed off billions of members of it!

Some habitual fruit- or seed-eating birds of the trees descend to the ground at certain seasons, or when an insect plague appears, changing their diet to suit nature's special need; others "lay low" the year around, waging a perpetual insect war. First in that war stands the meadow-lark. It is estimated that every meadow-lark is worth more than one dollar a year to the farmers, if only in consideration of the grasshoppers it destroys; and as insects constitute seventy-three per cent. of its diet, the remainder being seeds of weeds chiefly, the farmer might as well draw money out of the bank and throw it in the sea as to allow the meadow-lark to be shot; yet it has long been classed among game birds—a target for gunners.

"The average annual loss which the chinch bug causes to the United States cannot be less than twenty million dollars," says Dr. L. O. Howard, of the Department of Agriculture. "It feeds on Indian corn and on wheat and other small grains and grasses, puncturing the stalks and causing them to wilt." Incalculable numbers of this pest are eaten every season by bob-whites, or quail, which, it will be seen, are perhaps as valuable to the American people when roaming through our grain fields as when served on toast to our epicures. Blackbirds, crows, robins, native sparrows, chewinks, oven-birds, brown thrashers, ground

warblers, woodcock, grouse, plovers, and the yellow-winged woodpeckers or flickers, which feed on ants (whose chief offense is that they protect aphides or plant lice to "milk" them)—these, and many other birds contribute to our national wealth more than the wisest statistician could estimate. Many old farmers will wish at least the crow or the blackbird removed from this white list, but scientific experts have proved that the workman is worthy of his hire—that the birds which destroy enormous numbers of white grubs, army worms, cutworms, and grasshoppers in the fields are as much entitled to a share of the corn as the horse that plows it or the ox that treads it out. The evil results following a disturbance of nature's nice balances rest on no scientific theories but on historic facts. Protective bird laws, which very quickly increase the insect police force, add many million dollars annually to the permanent wealth not only of such enlightened states as have adopted them, but to the country at large, for birds, like the rain, minister to the just and the unjust. And the rising generation of farmers is the first to be taught this simple economic fact!

Weed Destroyers

Weeds have been defined as plants out of place, and agriculture as an everlasting war against them. What natural allies has the pestered farmer?

Happily, the sparrows and finches, among the most widely distributed, prolific, and hardy of birds, are his constant co-workers, some members of their large clan being with him wherever he may live every day in the year. Nearly all, it is true, vary their diet with insects, but surely they are no less welcome on that account!

"Certain garden weeds produce an incredible number of seeds," says Dr. Sylvester Judd, of the Biological Survey. "A single plant of one of these species may mature as many as a hundred thousand seeds in a season, and if unchecked would produce in the spring of the third year ten billion plants." With these figures in mind, it is easy to account for the exceedingly rapid spread of certain weeds from the Old World—daisies and wild carrot, for example—of comparatively recent introduction here. The great majority of weeds being annuals, the parent plant dying after frost or one season's growth and the species living only in embryo during the remainder of the year, it follows that seed-eating birds are of enormous practical value. Even the despised English sparrows do great good as weed destroyers—almost enough to tip the scales of justice in their favor. In autumn, what noisy flocks of the little gamins settle on our lawns and clean off seeds of crab-grass, dandelion, plantain, and other upstarts in the turf! The song sparrow, the chipping sparrow, the white-throated sparrow, and the goldfinch are glad enough to follow after their English cousin and get out the dandelion seeds exposed after he cuts off several long, protecting scales of the involucre. Because of his special preference, however, the little black and yellow goldfinch, an unequaled destroyer of the composite weeds, is often called the thistle-bird. The few tender sparrows which must winter in the South are replaced in autumn by hardier relatives, whose feeding grounds at the Far North are buried under snow; by juncos, snowflakes, longspurs, redpolls, grosbeaks, and siskins, all of which are busy gleaners among the plow furrows in fallow land, and the brown weed stalks that flank the roadsides or rear themselves above

the snowy fields. In enumerating the little weeders that serve us without so much as a "thank you"—and fifty different birds are on this list—we must not forget the horned lark, chewink, blackbird, cowbird, grackle, meadowlark, bobolink, ruffed grouse, bob white, and the mourning dove.

Even the most sluggish birds—and some of the finch tribe have a reputation for being that—are fast livers compared with men. Their hearts beat twice as fast as ours; we should be feverish were our blood as hot; therefore, the quantity of food required to sustain such high vitality, especially in winter, is relatively enormous. A tree sparrow will eat one hundred seeds of pigeon-grass at a single meal, and a snowflake, observed in a Massachusetts garden one February morning, picked up more than a thousand seeds of pigweed for breakfast.

Business Co-partnerships

In view of the enormous amount of work certain birds are capable of doing for the farmers, how many take any pains to secure their free services continuously; to get help from them as well as from the spraying machine and insect powder on which so much time and money are spent annually? The truth is that very few farmers, indeed, realize the true situation; therefore the intelligent, the obvious thing to be done is generally neglected.

One of the most successful fruit-growers in Georgia, whose luxuriant orchard and luscious peaches are famous throughout the market, entered some time ago into a systematic, business-like understanding with a number of birds whose special appetites for special insect pests make them invaluable partners. Up and down through the

long avenues of trees he erected poles from twenty to thirty feet high, and from them swung gourds for the purple martins to nest in, because he has found this bird his chief ally in keeping down the curculio beetle, the most destructive foe, perhaps, the fruit-grower has to fight. Through its attack alone the value of a single peach orchard has been reduced from ten thousand dollars to nothing in three weeks! The damage this little beetle does to American fruit-growers annually amounts to many millions of dollars. Just when the martins return from the tropics, it is emerging from its winter hibernation. And when the nuptial flight of the curculio and the shot-hole borer and the root-borer moth occurs, it ought to be obvious to every fruit-grower that he cannot have too many insectivorous birds about. Bluebirds, which readily accept invitations to nest in boxes placed on poles and trees, destroy immense numbers of insects taken from the trees, ground, and air. In the Georgia orchard referred to, titmice, chickadees, and nuthatches are attracted by raw peanuts placed in the trees and scattered over the ground. Once these favorite nuts were discovered, this family of birds likewise joined the firm which, with the addition of the owner of the estate, now consists of purple martins, barn swallows, chimney-swifts, bluebirds, and wrens. Of course they have numerous assistants that come and go, but these are the recognized partners, both full-fledged and juniors, with homes on the place. And all draw enormous dividends from it in that unique and happy manner which greatly increases the cash revenues of the business. Perhaps the junior partners, the fledglings, with appetites bigger than their bodies for many eat more than their weight of food every

twenty-four hours), are of greater value than the seniors. Even seed-eating birds feed insects to their nestlings: an indigo bunting mother does not hesitate to ram a very large grasshopper down her very small baby's throat after she has nipped off the wings.

Partnerships in Nature

Just as many insects have resorted to curious and ingenious devices to avoid the birds' attention, so many trees, shrubs, and plants, with ends of their own to be gained, take great pains to attract it. Some insects mimic with their coloring that of their surroundings: one must look sharp before discovering the glaucous green worm on the glaucous green nasturtium leaf. Some, like the milkweed butterfly, secrete disagreeable juices to repel the birds, and other butterflies, which secrete none, fool their foes by bearing a superficial resemblance to it. Others, like the walking-stick, assume a form that can scarcely be distinguished from the objects they frequent. With what pains does the caterpillar draw together the edges of a leaf and hide within it, sleeping until ready to emerge into its winged stage, if by chance a pair of sharp eyes does not discover it at the beginning of its nap, and a sharper beak tear it ruthlessly from the snug cradle! Children who gather cocoons in the autumn are often disappointed to find so many already empty. They forget that thousands of hungry migrants have been out hunting every morning before they left their beds. No cradle yet woven is too rough for some bird to tear open for the luscious, fat morsel within. To the Baltimore oriole looking for a dinner, the strong cocoon of the great cecropia moth yields one as readily as another; and I have

watched an orchard oriole that brought her young family to feast in a tamarisk bush in the garden, pick forty-seven basket-worms from their cleverly concealed baskets in fifteen minutes.

But how the bright berries, hanging on the dogwood, mountain ash, pokeweed, choke-cherry, shadbush, partridge vine, wintergreen, bittersweet, juniper, Virginia creeper, and black alder, cry aloud to every passing bird, "EAT ME," like Alice's marmalade in Wonderland! Many plants depend as certainly on the birds to distribute their seeds as on bees and other insects to transfer the pollen of their flowers. It is said that the cuckoo-pint or spotted arum of Europe, a relative of our jack-in-the-pulpit, actually poisons her messengers carrying seed, because the decaying flesh of the dead birds affords the most nourishing food for her seed to germinate in. Happily we have no such murderous pest here. Our wild trees, shrubbery plants, and vines are honorable partners of the birds. They feed them royally, asking in return only that the undigested seeds or kernels which pass through the alimentary canal uninjured may be dropped far away from the parent plant, to found new colonies. For how much of the earth's beauty are not birds, the seed-carriers, responsible!

Up-to-date farmers who wish to protect their cultivated fruits have learned that birds actually have the poor taste to prefer wild ones, and so they plant them on the outskirts of the farm, along walls and fences. They have also learned that many birds puncture grapes and drink fruit juice simply because they are thirsty. Pans kept filled with fresh water compete successfully with the grape arbor.

Saints and Sinners

Hawks and owls may be so labeled, yet it would be difficult, if not impossible, to convince some people that there is a saint in the group. There is an instinctive popular hatred of every bird of prey—a hatred so unreasoning and unrelenting that it is well-nigh impossible to secure legislation to protect some of the farmers' most beneficial friends. After condemning the duck hawk for its villainies upon our wild water-fowl, and that powerful brigand, the goshawk, for audaciously carrying off full-grown poultry, ruffed grouse and rabbits, and Cooper's hawk, a deep-dyed chicken stealer, whose aggregate misdeeds are greater than any others (simply because his species is the most numerous), and his smaller prototype, the sharp-shinned hawk for destroying little chickens and song-birds, Doctor Fisher, who made an exhaustive study of hawks and owls for the Government, recommends clemency toward all the others. He investigated forty birds of prey found within our borders.

"It would be just as rational to take the standard for the human race from highwaymen and pirates as to judge all hawks by the deeds of a few," he says. "Even when the industrious hawks are observed beating tirelessly back and forth over the harvest fields and meadows, or the owls are seen at dark flying silently about the nurseries and orchards, busily engaged in hunting the voracious rodents which destroy alike the grain, produce, young trees, and eggs of birds, the curses of the majority of farmers and sportsmen go with them, and their total extinction would be welcomed. How often are the services to man misunderstood through ignorance! The birds of prey,

the majority of which labor day and night to destroy the enemies of the husbandman, are persecuted unceasingly, while that gigantic fraud—the house cat—is petted and fed and given a secure shelter from which it may emerge to spread destruction among the feathered tribe. The difference between the two can be summed up in a few words: Only three or four birds of prey hunt birds when they can procure rodents for food, while a cat seldom touches mice if she can procure birds or young poultry. A cat has been known to kill twenty young chickens in a day, which is more than most raptorial birds destroy in a lifetime."

Hawks and owls admirably supplement each other's work. One group hunts while the other sleeps. The owls usually remain in a chosen neighborhood through the winter, while the hawks go south. We are never left unprotected. In consideration of the overwhelming amount of good these unthanked friends do us, can we not afford to be to their faults a little blind?

A Volunteer Health Department

In the Southern states, Cuba, and the adjacent islands, the great dark vultures that go sailing high in air express the very poetry of motion; but surely their terrestrial habits have to do with the very prose of existence, for self-constituted health officers are they, scavengers of the fields, that rid them of putrefying animal matter. Instead of burying a dead chicken, dog, cat, or even a large domestic animal, the easy-going Negro lets it lie where it dropped, knowing full well that before it becomes offensive the vultures will have begun to feed upon it. In some of the smaller cities the vultures mingle freely with

the loungers about the market-place, gorging upon the refuse thrown about for the only street cleaners in sight. Where robins, woodpeckers, and many species of small song-birds are so lightly regarded as to be killed in shocking quantities and not always for food, the vultures are carefully protected by the Southern people, who, not yet realizing the greater value of insectivorous birds to the farmer, do nevertheless know enough to throw the arm of the law around their feathered scavengers.

As if enough services that birds render us had not already been enumerated in this list—which is merely suggestive and very far indeed from being complete—the birds that rid our beaches of putrefying rubbish must not be forgotten. While several sea and beach birds share this task, it is to the gulls that we are chiefly indebted. In the wake of garbage scows that put out to deep water from the harbors of the seacoast and Great Lakes where our large cities are situated, and following the ocean liners for the food thrown overboard from the ships' galleys; or resting in the estuaries of the larger rivers where the refuse floats down toward the tide, flocks of strong-winged gulls may be seen hovering about with an eye intently fastened on every floating speck. Enormous feeders, gulls and terns cleanse the waters as vultures do the land. Millions of these graceful birds that enliven the dullest marine picture have been sacrificed for no more worthy end than to rest entire or in mutilated sections on women's hats! But now that the people begin to understand what birds do for us, a happier day is dawning for them all.

CHAPTER II

THE THRUSH FAMILY

Bluebird—Robin—Wood Thrush—Veery

The Bluebird

Length—7 inches. About an inch longer than the English sparrow.

Male—Upper parts, wings, and tail bright blue, with rusty wash in autumn. Throat, breast, and sides cinnamon-red. Underneath white.

Female—Has duller blue feathers, washed with gray, and a paler breast than male.

Range—North America, from Nova Scotia and Manitoba to Gulf of Mexico. Southward in winter from Middle states to Bermuda and West Indies.

Migrations—March. November. Summer resident. A few sometimes remain throughout the winter.

Is there any sign of spring quite so welcome as the glint of the first bluebird unless it is his softly whistled song? No wonder the bird has become the symbol for happiness. Before the farmer begins to plough the wet earth, often while the snow is still on the ground, this hardy little minstrel is making himself very much at home in our orchards

and gardens while waiting for a mate to arrive from the South.

Now is the time to have ready on top of the grape arbor, or under the eaves of the barn, or nailed up in the apple tree, or set up on poles, the little one-roomed houses that bluebirds are only too happy to occupy. More enjoyable neighbors it would be hard to find. Sparrows will fight for the boxes, it is true, but if there are plenty to let, and the sparrows are persistently driven off, the bluebirds, which are a little larger though far less bold, quickly take possession. Birds that come earliest in the season and feed on insects, before they have time to multiply, are of far greater value in the field, orchard, and garden than birds that delay their return until warm weather has brought forth countless swarms of insects far beyond the control of either bird or man. Many birds would be of even greater service than they are if they received just a little encouragement to make their homes nearer ours. They could save many more millions of dollars' worth of crops for the famers than they do if they were properly protected while rearing their ever-hungry families. As two or even three broods of bluebirds may be raised in a box each spring, and as insects are their most approved baby food, it is certainly to our interest to set up nurseries for them near our homes.

But when people are not thoughtful enough to provide them before the first of March, the bluebirds hunt for a cavity in a fence rail, or a hole in some old tree, preferably in the orchard, shortly after their arrival, and proceed to line it with grass. From three to six pale blue eggs are laid. At first the babies are blind, helpless, and almost naked. Then they grow a suit of dark feathers with

speckled, thrush-like vests similar to their cousin's, the baby robin's; and it is not until they are able to fly that the lovely deep blue shade gradually appears on their grayish upper parts. Then their throat, breast, and sides turn rusty red. While creatures are helpless, a prey for any enemy to pounce upon, Nature does not dress them conspicuously. Adult birds, that are able to look out for themselves, may be very gaily dressed, but their children must wear sombre clothes until they grow strong and wise.

Young bluebirds are far less wild and noisy than robins, but their very sharp little claws discourage handling. These pointed hooks on the ends of their toes help them to climb out of the tree hollow, that is their natural home, into the big world that their presence makes so cheerful.

As might be expected of creatures so heavenly in color, the disposition of bluebirds is particularly angelic. Gentleness and amiability are expressed in their soft musical voice. *Tru-al-ly, tru-al-ly,* they sweetly assert when we can scarcely believe that spring is here; and *tur-wee, tur-wee* they softly call in autumn when they go roaming through the countryside in flocks of azure. Nevertheless, in a fair fight for the possession of a bird house, they will worst English sparrows nine times out of ten.

With the first cool days of autumn, bluebirds collect in flocks, often associating with song sparrows, robins, orioles, and kingbirds in sheltered, sunny places where insects are still plentiful. Their steady, undulating flight now becomes erratic as they take food on the wing—a habit that they may have learned by association with the kingbirds, for they also have adopted the habit of perching upon some conspicuous lookout and then suddenly launching out into the air for a passing insect and returning to their perch.

Long after their associates have gone southward, they linger like the last leaves on the tree. It is indeed "good-bye to summer" when the bluebirds withdraw their touch of brightness from the dreary November landscape at the north to whirl through Southern woods and feed on the waxy berries of the mistletoe.

The Robin

Length—10 inches.

Male—Dull brownish olive-gray above. Head black; tail brownish black, with exterior feathers white at inner tip. Wings dark brownish. Throat streaked with black and white. White eyelids. Entire breast bright rusty red; whitish below the tail.

Female—Duller and with paler breast, resembling the male in autumn.

Range—North America, from Mexico to arctic regions.

Migrations—March. October or November. Often resident throughout the year.

The early English colonists, who had doubtless been brought up, like the rest of us, on "The Babes in the Wood," named the bird after the only heroes in that melancholy tale; but in reality the American robin is a much larger bird than the little European robin-redbreast and less brilliantly colored. John Burroughs calls him, of all our birds, "the most native and democratic."

How the robin dominates birddom with his strong, aggressive personality! His voice rings out strong and clear in the early morning chorus, and, more tenderly subdued

at twilight, it still rises above all the sleepy notes about him. Whether lightly tripping over the lawn after the "early worm," or rising with his sharp, quick cry of alarm when startled, to his nest near by, every motion is decided, alert, and free. No pensive hermit of the woods, like his cousins, the thrushes, is this joyous, vigorous bird of the morning.

A man of science, who devoted many hours of study to learn the great variety of sounds made by common barnyard chickens in expressing their entire range of feeling, from the egg shell to the axe, could entertain an audience for an evening by imitating them. Similar study applied to robins would reveal as surprisingly rich results, but probably less funny. No bird that we have has so varied a repertoire as Robin Goodfellow: few people can recognize him by every one of his calls and songs. His softly warbled salute to the sunrise differs from his lovely evensong just as widely as the rapturous melody of his courting days differs from the more subdued, tranquil love song to his brooding mate. Indignation, suspicion, fright, interrogation, peace of mind, hate, warning to take flight—these and a host of other thoughts are expressed through his flexible voice.

Perhaps no one thing attracts so many birds about the house as a drinking dish—large enough for a bathtub as well, for birds are not squeamish and certainly no bird delights in sprinkling the water over his back more than a robin, often aided in his ablutions by the spattering of other bathers. But see to it that this drinking-dish is well raised above the reach of lurking cats.

Robins prefer to build near water; bringing coarse grasses, roots, and a few leaves or weed stalks for the foun-

dation of the nest and pellets of mud in their bills for the inner walls (which they cleverly manage to smooth into a bowl shape without a mason's trowel), and fine grasses for the lining, they saddle it on to the limb of an old apple tree. They prefer low-branching orchard or shade trees near our homes to the tall, straight shafts of the forest. Some have the courage to build among the vines or under the shelter of our piazzas. A pair of robins reared a brood in a little clipped bay tree in a tub next to a front door, where people passed in and out continually. Doubtless very many birds would be glad of the shelter of our comfortable homes for theirs if they could only trust us. Robins, especially, need a roof over their heads and a house for them need have no sides, merely a roofed-over shelf. When they foolishly saddle their nest on to an exposed limb of a tree, the first heavy rain is likely to soften the mud walls, and wash apart the heavy, bulky structure, when

"Down tumble babies and cradle and all."

There are far too many tragedies of the nests after every heavy spring rain.

Too much stress is laid on the mischief done by the robins in the cherry trees and strawberry patches, and too little upon the quantity of worms and insects they devour. Professor Treadwell, who experimented upon some young robins kept in captivity, learned that they ate sixty-eight earthworms daily—"that is, each bird ate forty-one per cent. more than its own weight in twelve hours! The length of these worms, if laid end to end, would be about fourteen feet. Man, at this rate, would eat about seventy pounds of flesh a day, and drink five or six gallons of

water." How hard the father and mother birds work to keep their fledglings' crops filled! No wonder robins like to live near our homes where the enriched land contains many fat grubs, and the smooth lawns, that they run across so lightly, make hunting for earthworms comparatively easy.

Toward the end of June one may see robins flying in flocks after sundown. Old males and young birds of the first brood scatter themselves over the country by day to pick up the best living they can, but at night they collect in large numbers at some favorite roosting place. Oftentimes the mother birds are now raising second or even third broods. We like to believe that the fathers return from the roosts at sun-up to help supply those insatiable babies with worms throughout the long day. Every two or three minutes up spring the little heads, mostly gaping yellow mouths, like Jacks-in-the-box.

After family cares are over for the year, robins moult, and then they hide, mope, and keep silent for a while. But in September, in a suit of new feathers, they are feeling vigorous and cheerful again; and, gathering in friendly flocks, they roam about the woodland borders to feed on the dogwood, choke berries, juniper berries, and other small fruits, changing their diet with the season. By dropping the undigested berry seeds far and wide, they plant great numbers of trees and shrubs and help to make the earth beautiful as they travel. With them every day is Arbor Day.

It is a very dreary time when the last robin leaves us, and an exceptionally cold winter when a few stragglers from the south-bound flocks do not remain in some sheltered, sunny, woodland hollow.

The Wood Thrush

Length—8 to 8.3 inches. About two inches shorter than the robin.

Male and Female—Brown above, reddish on head and shoulders, and shading into olive-brown on tail. Throat, breast, and underneath white, plain in the middle, but heavily marked on sides and breast with heart-shaped spots of very dark brown. Whitish eye-ring.

Migrations—Late April or early May. October. Summer resident.

"*Here am I,*" come the thrush's three clear, bell-like notes of self-introduction. The quality of his music is delicious, rich, penetrative, pure, and vibrating like notes struck upon a harp. If you don't already know this most neighborly of the thrushes—as he is also the largest and brightest and most heavily spotted of them all—you will presently become acquainted with one of the finest songsters in America. Wait until evening when he sings at his best. *Nolee-a-e-o-lee-nolee-aeolee-lee!* peals his song from the trees. Love alone inspires his finest strains; but even in July, when bird music is quite inferior to that of May and June, he is still in good voice. A song so exquisite proves that the thrush comes near to being a bird angel, very high in the evolutionary scale.

Pit-pit-pit you may hear sharply, excitedly jerked out of some bird's throat, and you wonder if a note so disagreeable can really come from the wonderful songster. By sharply striking two small stones together you can

closely imitate this alarm call. Social as the wood thrush is and abundant, too, it is also eminently high-bred; and when contrasted with its tawny cousin the veery, that hides in the nearest bushes as you approach, or with the hermit thrush, that pours out its heavenly song in the solitude of the forest, how neighborly and gracious and full of gentle confidence it seems. Every gesture is graceful and elegant; even a wriggling beetle is eaten as daintily as caviare at the king's table. It is only when its confidence in you is abused, and you pass too near the low-hung nest, that might easily be mistaken for a robin's, that the wood thrush so far forgets itself as to become excited. *Pit, pit, pit,* sharply reiterated, is called out at you with a strident quality in the tone that is painful evidence of the fearful anxiety your presence gives this gentle bird.

Too many guardians of nests, whether out of excessive happiness or excessive stupidity, have a dangerous habit of singing near them. Not so the wood thrush. "*Come to me,*" as the opening notes of its flute-like song have been freely translated, invites the intruder far away from where the blue eggs lie cradled.

While sitting, the mother bird is quite tame. A photographer placed his camera within four feet of a nest, changed the plates, and clicked the shutter three times for as many pictures without disturbing the gentle sitter who merely winked her eye at each click.

Wood thrushes seem to delight in weaving bits of paper or rags into their deep cradles. A nest in the shrubbery near a bird-lover's home in New Jersey had many bits of newspaper attached to its outer walls, but the most conspicuous strip in front advertised in large letters "A House to Be Let or Sold." The original builders happily

took the next lease, and another lot of nervous, fidgety baby tenants came out of four light greenish blue eggs; but, as usual, they moved away to the woods after a fortnight to join the choir invisible.

The Veery

Length—7 to 7.5 inches. About one-fourth smaller than the robin. A trifle smaller than the wood thrush.
Male and Female—Uniform olive-brown, with a tawny cast above. Centre of the throat white, with cream-buff on sides of throat and upper part of breast, quite lightly marked with wedge-shaped, brown points Underneath white, or with a faint grayish tinge.
Range—United States, westward to plains.
Migrations—May. October. Summer resident.

To many of us the veery, as Wilson's thrush is most often called, is merely a voice, a sylvan mystery, reflecting the sweetness and wildness of the forest, a vocal "will-o'-the-wisp" that entices us deeper and deeper into the woods. The song descends in a succession of trills without break or pause; but no words can possibly convey an idea of the quality of the music. It is as if two voices, an alto and a soprano, were singing at the same time. *Whee-you, whee-you*—the familiar notes might come from a scythe being sharpened on a whetstone, were the sound less musical than it is. The veery, that never claims an audience, sings at night also, and its weird, sweet strains floating through the woods at dusk thrill one like the mysterious voice of a disembodied spirit.

Shy, elusive, the veery is nevertheless more common in New England than the wood thrush whose range is more southerly. During its spring and fall migrations only does it frequent the elms and maples that men have planted. Take a good look at its tawny coat and lightly spotted cream-buff breast before it goes away to hide. Like Kipling's "cat that walked by himself," the veery prefers the "wild, wet woods," and there its ringing, weird, whistling monotone, that is so melodious without being a melody, seems to come from you can't guess where. The singer keeps hidden in the dense, dark undergrowth.

But it is not quite the recluse that the hermit thrush is—that smallest of the thrushes with a voice as heavenly as an ethereal hymn, where it floats upward from the dim, deep forest. The cool woods of the Adirondacks, the White Mountains, and the Laurentian range in Canada are its favorite summer resorts.

CHAPTER III

SOME NEIGHBORLY ACROBATS

RUBY-CROWNED AND GOLDEN-CROWNED KINGLETS—CHICKADEE—TUFTED TITMOUSE—WHITE-BREASTED NUTHATCH—RED-BREASTED NUTHATCH

The Ruby-crowned Kinglet

Length—4.25 to 4.5 inches. About two inches smaller than the English sparrow.

Male—Upper parts grayish olive-green, brighter nearer the tail; wings and tail dusky, edged with yellowish olive. Two whitish wing-bars. Breast and underneath light yellowish gray. In the adult male a vermilion spot on crown of his ash-gray head.

Female—Similar, but without the vermilion crest.

Range—North America. Breeds from northern United States northward. Winters from southern limits of its breeding range to Central America and Mexico.

Migrations—October. April. Rarely a winter resident at the North. Most common during its migrations.

Count that a red-letter day on your calendar when first you see either this tiny, dainty sprite, or his next of kin, the golden-crowned kinglet, fluttering, twinkling about the evergreens. In republican America we don't often

have the chance to meet two crowned heads. Energetic as wrens, restless as warblers, and as perpetually looking for insect food, the kinglets flit with a sudden, jerking motion from twig to twig among the trees and bushes, now on the lawn, now in the orchard, and presently in the hedgerow down the lane. They have a pretty trick of lifting and flitting their wings every little while. The bluebird and pine grosbeak have it, too, but their much larger, trembling wings seem far less nervous.

Happily the kinglets are not at all shy; no bird is that is hatched out so far north that it never sees a human being until it travels southward to spend the winter. Alas! It is the birds that know us too well that are often the most afraid. When the leaves are turning crimson and russet and gold in the autumn, keep a sharp lookout for the plump little grayish, olive-green birds that are even smaller than wrens, and not very much larger than hummingbirds. Although members of quite a different family (*Sylviidae*)—the kinglets are not exclusive—they condescend to join the nuthatches and chickadees in the orchard, to help clean the farmer's fruit trees or pick up a morsel at the free lunch counter in zero weather. At this season there is nothing in the kinglet's thin, metallic call-note, like a vibrating wire, to indicate that when in love he is a fine songster. And love or war is necessary to make the king show us his crown. But vanity or anger is sufficient excuse for lifting the dark feathers that nearly conceal the beauty spot on the top of his head when the midget's mind is at ease. If you approach very near—and he will allow you to almost touch him—you may see the little patch of brilliant red feathers, it is true, but you

will probably get an unexpected, chattering scolding from the little king as he flies away.

In the spring his love song is as surprisingly strong in proportion to his size as the wren's. It seems impossible for such a volume of mellow, flute-like melody to pour from a throat so tiny. Before we have a chance to hear it again, the singer is off with his tiny queen to nest in some spruce tree beyond the Canadian border.

The golden-crowned kinglet, similar to its next of kin, has a touch of orange color, bordered by yellow and outlined by black for his adornment; otherwise one could scarcely tell the kinglets apart.

The Chickadee

Length—5 to 5.5 inches. About an inch smaller than the English sparrow.

Male and Female—Not crested. Crown and nape and throat black. Above gray, slightly tinged with brown. A white space, beginning at base of bill, extends backward, widening over cheeks and upper part of breast, forming a sort of collar that almost surrounds neck. Underneath dirty white, with pale rusty-brown wash on sides. Wings and tail gray, with white edgings. Plumage downy.

Range—Eastern North America. North of the Carolinas to Labrador. Does not migrate in the North.

Migrations—Late September. May. Winter resident; permanent resident in northern parts of the United States.

ROBIN

VEERY

Bitterly cold and dreary though the day may be, that "little scrap of valor," the chickadee, keeps his spirits high until ours cannot but be cheered by the oft-repeated, clear, tinkling silvery notes that spell his name. *Chicka-dee-dee, chicka-dee-dee,* he introduces himself. How easy it would be for every one to know the birds if all would but sing out their names as clearly as the chickadee and towhee do.

No bird, except the wren, is more cheerful than the chickadee, and his cheerfulness, fortunately, is contagious. None will respond more promptly to your whistle in imitation of his three very high, clear call notes, and come nearer and nearer to make quite sure you are only a harmless mimic. He is very inquisitive. Although not a bird may be in sight when you first whistle his call, nine chances out of ten there will be a faint echo from some far-distant throat before very long; and by repeating the notes at short intervals you will have, probably, not one but several echoes from as many different chickadees whose curiosity to see you soon gets the better of their appetites and brings them flying, by easy stages, to the tree above your head. Where there is one chickadee there are apt to be more in the neighborhood; for these sociable, active, cheerful little black-capped fellows in gray like to hunt for their living in loose-scattered flocks throughout the fall and winter. Their family parties alone are always large. They are wonderfully tame; except the chipping sparrow, perhaps the tamest birds that we have. Patient people, who know how to whistle up these friendly sprites, can sometimes draw them close enough to touch, and an elect few, who have the special gift of winning a wild bird's confidence, can induce the chickadee to alight upon their hands.

Blessed with a thick coat of fat under his soft, fluffy gray feathers, a hardy constitution, and a sunny disposition, what terrors has the winter for him? When the thermometer goes down, his spirits seem to go up the higher. Dangling like a circus acrobat on the cone of some tall pine tree; standing on an outstretched twig, then turning over and hanging with his black-capped head downward from the high trapeze; carefully inspecting the rough bark on the twigs for a fat grub or a nest of insect eggs, he is constantly hunting for food and singing grace between bites. His *day, day, day,* sung softly over and over again, seems to be his equivalent for "Give us this day our daily bread."

How delightfully he and his busy friends, who are always within call, punctuate the snow-muffled, midwinter silence with their ringing calls of good cheer! The orchards where chickadees, titmice, nuthatches, and kinglets have dined all winter will contain few worm-eaten apples next season. At least one thrifty fruit-grower attracts to his trees all the winter birds from far and near by keeping on several shelves nailed up in his orchard, strips of suet, cheap raisins, raw peanuts chopped fine, cracked hickory nuts, and rinds of pork. The free lunch counters are freely patronized. There is scarcely an hour in the day, no matter how cold, when some hungry feathered neighbor may not be seen helping himself to the heating, fattening food he needs to keep his blood warm.

At the approach of warm weather, chickadees retreat from public gaze to become temporary recluses in damp, deep woods or woodland swamps where insects are most plentiful. For a few months they give up their friendly flocking ways and live in pairs. Long journeys they do not undertake from the North when it is time to nest; but

southern birds move northward in the spring. Happily the chickadee may find a woodpecker's vacant hole in some hollow tree; worse luck if a new excavation must be made in a decayed birch—the favorite nursery. Wool from the sheep pasture, felt from fern fronds, bits of bark, moss, hair, and the fur of "little beasts of field and wood"—anything soft that may be picked up goes to line the hollow cradle in the tree trunk. How the crowded chickadee babies must swelter in their bed of fur and feathers tucked inside a close, stuffy hole!

The Tufted Titmouse

Don't expect to meet the tufted titmouse if you live very far north of Washington. He is common only in the South and West.

This pert and lively cousin of the lovable little chickadee is not quite so friendly and far more noisy. *Peto-peto-peto* comes his loud, clear whistle from the woods and clearings where he and his large family are roving restlessly about all through the autumn and winter. A famous musician became insane because he heard one note ringing constantly in his overwrought brain. If you ever hear a troup of titmice whistling *peto* over and over again for hours at a time, you will pity poor Schumann and fear a similar fate for the birds. But they seem to delight in the two tiresome notes, uttered sometimes in one key, sometimes in another. Another call—*day-day-day*—reminds you of the chickadee's, only the tufted titmouse's voice is louder and a little hoarse, as it well might be from such constant use.

Few birds that we see about our homes wear a top knot on their heads. The big cardinal has a handsome red one; the larger blue jay's is bluish gray; the cedar waxwing's is a Quaker drab; but the little titmouse, which is about the size of an English sparrow, may be named at once by the gray-pointed crest that gives him the appearance of being so pert and jaunty. When he hangs head downward from the trapeze on the oak tree, this little gray acrobat's peaked cap seems to be falling off; whereas the black skull cap on the smaller chicadee fits close to his head no matter how much he turns over the bar and dangles underneath it.

Neither one of these cousins is a carpenter like the woodpecker. The titmouse has a short, stout bill without a chisel on it, which is why it cannot chip out a hole for a nest in a tree trunk or old stump unless the wood is much decayed. This is why these birds are so pleased to find a deserted woodpecker's hole. Not alone are they saved the trouble of making an excavation, but a deep tunnel in a tree trunk means security for their babies against hawks, crows, jays, and other foes, as well as against wind and rain.

When we cut down the decayed and hollow old trees, let us see to it that nesting boxes are provided for the birds that once made them their home if we really want them for neighbors.

The White-breasted Nuthatch

Length—5.5 to 6 inches. A trifle smaller than the English sparrow.

Male and Female—Upper parts slate color. Top of head and nape black. Wings dark slate, edged with black,

CHICKADEE

TUFTED TITMOUSE

that fades to brown. Tail feathers brownish black, with white bars. Sides of head and underneath white, shading to pale reddish under the tail. (Female's head leaden.) Body flat and compact. Bill longer than head.

Range—British provinces to Mexico. Eastern United States.

Migrations—October. April. Common resident. Most prominent in winter.

When it comes to acrobatic performances in the trees, neither the chickadee nor the titmouse can rival their relatives, the little bluish gray nuthatches Indeed, any circus might be glad to secure their expert services. Hanging fearlessly from the topmost branches of the tallest pine, running along the under side of horizontal limbs as comfortably as along the top of them, or descending the trunk head foremost, these wonderful little gymnasts keep their nerves as cool as the thermometer in January. From the way they travel over any part of the tree they wish, from top and tip to the bottom of it, no wonder they are sometimes called tree mice. Only the fly that walks across the ceiling, however, can compete with them in clinging to the under side of boughs.

Why don't they fall off? If ever you have a chance, examine their claws. These, you will see, are very much curved and have sharp little hooks that catch in any crack or rough place in the bark and easily support the bird's weight. As a general rule the chickadee keeps to the end of the twigs and the smaller branches; the tufted titmouse rids the larger boughs of insects, eggs, and worms hidden in

the scaly bark; but the nuthatches can climb to all but inaccessible places. With the help of the hooks on their toes it does not matter to them whether they run upward, downward, or sidewise; and they can stretch their bodies away from their feet at some very queer angles. Their long bills penetrate into deep holes in the thick bark of the tree trunks and older limbs and bring forth from their hiding places insects that would escape almost every other bird except the brown creeper and the woodpecker. Of course, when any feathered acrobat is performing in the trees, he is working hard to pick up a dinner, not exercising merely for fun.

The Red-breasted Nuthatch

The most familiar nuthatch, in the eastern United States, is the one with the white breast; but in the Northern states and Canada there is another common winter neighbor, a smaller compactly feathered, bluish gray gymnast with a pale rusty breast, a conspicuous black line running apparently through his eye from the base of his bill to the nape of his neck and heavy white eyebrows. This is the hardy little red-breasted nuthatch. His voice is pitched rather high and his drawling notes seem to come from a lazy bird rather than from one of the most vigorous and spry little creatures in the wood. The nasal *ank-ank* of his white-breasted cousin is uttered, too, without expression, as if the bird were compelled to make a sound once in a while against his will. Both of these cousins have similar habits. Both are a trifle smaller than the English sparrow. In summer they merely hide away in the woods to nest, for they are not migrants. It is only when nesting duties are over in the autumn that they become neighborly.

Who gave them their queer name? A hatchet would be a rather clumsy tool to use in opening a nut, but these birds have a convenient, ever-ready one in their long, stout, sharply pointed bills with which they hack apart the small thin-shelled nuts like beech nuts and hazel nuts, chinquapins and chestnuts, kernels of corn and sunflower seeds. These they wedge into cracks in the bark just big enough to hold them. During the summer and early autumn when insects are plentiful, the nuthatches eat little else; and then they thriftily store away the other items on their bill of fare, squirrel fashion, so that when frost kills the insects, they may vary their diet of insect eggs and grubs with nuts and the larger grain. Flying to the spot where a nut has been securely wedged, perhaps weeks before, the bird scores and hacks and pecks it open with his sharp little hatchet, whose hard blows may be heard far away.

CHAPTER IV

A FAMILY GROUP OF LIVELY SINGERS

MARSH WREN—HOUSE WREN—CAROLINA WREN—BROWN THRASHER—CATBIRD—MOCKING-BIRD

The Marsh Wren

Length—4.5 to 5.2 inches. Actually a little smaller than the English sparrow. Apparently half the size.
Male and Female—Brown above, with white line over the eye, and the back irregularly and faintly streaked with white. Wings and tail barred with darker cinnamon-brown. Underneath white. Sides dusky. Tail long and often carried erect. Bill extra long and slender.
Range—United States and southern British America.
Migrations—May. September. Summer resident.

Hidden among the tall grasses and reeds along the creeks and rivers lives the long-billed marsh wren, a nervous, active little creature that you know at a glance. With tail cocked up and even tilted forward toward her head in the extreme of wren fashion, or suddenly jerked downward to help keep her balance, she sways with the grass as it blows in the wind—a dainty little sprite. With no desire to make your acquaintance, she flies with a short, jerky motion (because of her short wings) a few rods away,

then drops into the grasses which engulf her as surely as if she had dropped into the sea. Like the rails, she has her paths and runways among the tall sedges and cat-tails, where not even a boy in rubber boots may safely follow.

But she does not live alone. Withdraw, sit down quietly for awhile and wait for the excitement of your visit to subside; for every member of the wren colony, peering sharply at you through the grasses, was watching you long before you saw the first wren. Presently you hear a rippling, bubbling song from one of her neighbors; then another and another and still another from among the cat-tails which you now suspect conceal many musicians. The song goes off like a small explosion of melody whose force often carries the tiny singer up into the air. One musical explosion follows another, and between them there is much wren talk—a scolding chatter that is as great a relief to the birds' nervous energy as the exhaust from its safety valve is to a steam engine. The rising of a red-winged blackbird from his home in the sedges, the rattle of the kingfisher on his way up the creek, or the leisurely flapping of a bittern over the marshes is enough to start the chattering chorus.

Why are the birds so excited? This is their nesting season, May, and really they are too busy to be bothered by visitors. Most birds are content to make one nest a year but not these, who, in their excess of wren energy, keep on building nest after nest in the vicinity of the one preferred for their chocolate-brown eggs. Bending down the tips of the rushes they somehow manage to weave them with the weeds and grasses they bring, into a bulky ball suspended between the rushes and firmly attached to them. In one side of this green grassy globe they leave an entrance through which to carry the finer grasses for the

lining and the down from last season's burst cat-tails. When a nest is finished, its entrance is often cleverly concealed. If there are several feet of water below the high and dry cradle, so much the better, think the wrens—fewer enemies can get at them; but they do sometimes build in meadows that are merely damp.

In such meadows the short-billed marsh wren, a slightly smaller sprite, similar in appearance and in habits, prefers to live.

The House Wren

Length—4.5 to 5 inches. Actually about one-fourth smaller than the English sparrow; apparently only half as large because of its erect tail.

Male and Female—Upper parts cinnamon-brown; deepest on head and neck; lightest above tail, which is more rusty. Back has obscure, dusky bars; wings and tail finely barred. Underneath whitish, with grayish-brown wash and faint bands most prominent on sides.

Range—North America, from Manitoba to the Gulf. Most common in the United States, from the Mississippi eastward. Winters south of the Carolinas.

Migrations—April. October. Common summer resident.

Early some morning in April there will go off under your window that most delightful of all alarm-clocks—the tiny, friendly house wren, just returned from a long visit south. Like some little mountain spring that, having been imprisoned by winter ice, now bubbles up in the spring sunshine, and goes rippling along over the pebbles, tumbling

over itself in merry cascades, so this little wren's song bubbles, ripples, cascades in a miniature torrent of ecstasy. The song seems to bubble up faster than he can sing. "Foive notes to wanst" was an Irishman's description of it. After the wren's happy discovery of a place to live in, his song will go off in a series of musical explosions all day long, now from the roof, now from the clothes-posts, the fence, the barn, or the wood-pile. There never was a more tireless, spirited, brilliant singer. From the intensity of his feelings, he sometimes droops that expressive little tail of his, which is usually so erect and saucy.

Year after year wrens return to the same nesting places: a box set up against the house, a crevice in the barn, a niche under the eaves; but once home, always home to them. The nest is kept scrupulously clean; the house-cleaning, like the house-building and renovating, being accompanied by the cheeriest of songs, that makes the bird fairly tremble by its intensity. But however angelic the voice of the house wren, its temper can put to flight even the English sparrow. Nevertheless, it is a safe precaution in making wren houses to cut the entrance hole no larger than the ring that is drawn with a pencil around a silver quarter of a dollar—a hole too small for sparrows but just right for wrens. They really prefer boxes to the holes in stumps and trees they used to occupy before there were any white people on this continent. But the little mites have been known to build in tin cans, coat pockets, old shoes, mittens, hats, glass jars, and even inside a human skull that a medical student hung out in the sun to bleach!

The male begins to carry twigs into the house before he finds a mate. The day little Jenny Wren appears on the scene, how he does sing! Dashing off for more twigs, but

stopping to sing to her every other minute, he helps furnish the cottage quickly, but of course, he overdoes it—he carries in more twigs and hay and feathers than the little house can hold, then pulls half of them out again. Jenny gathers, too, for she is a bustling housewife and arranges matters with neatness and despatch to suit herself. Neither vermin nor dirt will she tolerate within her well-kept home. Everything she does pleases her ardent little lover. He applauds her with song; he flies about after her with a nervous desire to protect; he seems beside himself with happiness. Let any one pass too near his best beloved, and he begins to chatter excitedly: *Chit-chit-chit-chit* as much as to say "Oh, do go away, go quickly! Can't you see how nervous and fidgety you make me?"

If you fancy that Jenny Wren, who is patiently sitting on the little pinkish chocolate-spotted eggs in the centre of her feather bed, is a demure, angelic creature, you have never seen her attack the sparrow, nearly twice her size, that dares put his impudent head inside her door. Oh, how she flies at him! How she chatters and scolds! What a plucky little shrew she is, after all! Her piercing, chattering, scolding notes are fairly hissed into his ears until he is thankful enough to escape with his life.

What rent do the wrens pay for the little houses you put up for them? No man is clever enough to estimate the vast numbers of insects on your place that they destroy. They eat nothing else, which is the chief reason why they are so lively and excitable. Unable to soar after flying insects because of their short, round wings, they keep, as a rule, rather close to the ground which their finely barred brown feathers so closely match. Whether hunting for grubs in the wood-pile, scrambling over the brush heap

RED–BREASTED NUTHATCH

WREN

after spiders, searching among the trees to provide a dinner for their large families, or creeping, like little feathered mice, in queer nooks and crannies among the outbuildings on the farm, they are always busy in your interest which is also theirs. It certainly pays, in every sense, to encourage wrens.

The Carolina Wren

The house wrens have a tiny cousin, a mite of a bird called the winter wren, that is so shy and retiring it is difficult to become acquainted with it where it hides in mossy, rocky woods near water. But a larger chestnut-brown bird, all finely waved and barred with darker markings, as all these relatives are, is the Carolina wren which is quite common in the Middle and Southern states. However it, too, really prefers the forest undergrowths near water, fallen logs, half-decayed stumps and mossy rocks where insects lurk but cannot hide from his sharp, peering eyes. Now here, now there, appearing and disappearing, never at rest, even his expressive tail being in constant motion, he seems as nervously active as Jenny Wren's fidgety husband. His loud-ringing, three-syllabled whistle—*Tea-ket-tle, Tea-ket-tle, Tea-ket-tle*—suggests the crested titmouse's *peto* of two syllables, but in quality only.

The Brown Thrasher

Length—11 to 11.5 inches. Fully an inch longer than the robin.

Male—Rusty red-brown above; darkest on wings, which have two short whitish bands. Underneath white, heavily streaked (except on throat) with dark-brown,

arrow-shaped spots. Tail very long. Bill long and curved at tip.

Female—Paler than male.

Range—United States to Rockies. Nests from Gulf states to Manitoba and Montreal. Winters south of Virginia.

Migrations—Late April. October. Common summer resident.

People who are not very well acquainted with the birds about them usually mistake the long-tailed brown thrasher for a thrush because he has a rusty back and a speckled white breast, which they seem to think is exclusively a thrush characteristic, which it certainly is not. The oven-bird and several members of the sparrow tribe, among other birds, have speckled and streaked breasts, too. The brown thrasher is considerably longer than a thrush and his habits are quite different. Watch him nervously twitch his long tail, or work it up and down like one end of a see-saw, or swing it like a pendulum, or suddenly jerk it up erect while he sits at attention in the thicket, then droop it when, after mounting to a conspicuous perch, he lifts his head to sing, and you will probably "guess right the very first time" that he is a near relative of the wrens, not a thrush at all. As a little sailor-boy once said, "He carries his tell-tail on the stern."

Like his cousin, the catbird, the brown thrasher likes to live in bushy thickets overgrown with vines. Here, running over the ground among the fallen leaves, he picks up with his long slender bill, worms, May beetles, and scores of other kinds of insects that, but for him, would soon find

their way to the garden, orchard, and fields. Yet few farmers ever thank him. Because they don't often see him picking up the insects in their cultivated land, they wrongly conclude that he does them no benefit, only mischief, because, occasionally, he does eat a little fruit. It seems to be a dreadful sin for a fellow in feathers to help himself to a strawberry or a cherry or a little grain now and then, although having eaten quantities of insects that, but for him, would have destroyed them, who has earned a better right to a share of the profits?

The thrasher's song entrances every listener. He seems rather proud of it for although at other times he may keep himself well concealed among the shrubbery, when about to sing, he chooses a conspicuous perch as if to attract attention to his truly brilliant performance.

This common and tuneful neighbor has been called a ground "thrush" because it so often chooses to place its nest at the roots of tall weeds in an open field; but a low bush suits it quite as well. Its bulky nest is not a very choice piece of architecture. Twigs, leaves, vine tendrils, and bits of bark form its walls, and the speckled, greenish blue eggs within are usually laid upon a lining of fine black rootlets.

The Catbird

Length—9 inches. An inch shorter than the robin.

Male and Femal—Dark slate above; below somewhat paler; top of head black. Distinct chestnut patch under the black tail, feet and bill black also. Wings more than two inches shorter than the tail.

Range—British America to Mexico; west to Rocky

Mountains, rarely to Pacific Coast. Winters in Southern states, Central America, and Cuba.

Migrations—May. November. Common summer resident.

Slim, lithe, elegant, dainty, the catbird, as he runs lightly over the lawn or hunts among the shrubbery, appears to be a fine gentleman among his kind—a sort of Beau Brummel, in smooth, gray feathers who has preened and prinked until his toilet is quite faultless. He is among the first to discover the bathing dish or drinking pan that you have set up in your garden, for he is not too squeamish, in spite of his fine appearance, to drink from his bath. With well-poised, black-capped head erect, and tail up, too, wren fashion, he stands at attention on the rim of the dish, alert, listening, tense—the neatest, trimmest figure in birddom.

After he has flown off to the nearest thicket, what a change suddenly comes over him! Can it be the same bird? With puffed-out, ruffled feathers, hanging head and drooping tail, he now suggests a fat, tousled schoolboy just tumbled out of bed Was ever a bird more contradictory? One minute, from the depths of the bushy undergrowth where he loves to hide, he delights you with the sweetest of songs, not loud like the brown thrasher's, but similar; only it is more exquisitely finished, and rippling. *Prut! prut! coquillicot!* he begins. *Really, really, coquillicot! Hey, coquillicot! Hey, victory!* his inimitable song goes on like a rollicking recitative. The next minute you would gladly stop your ears when he utters the disagreeable cat-call that has given him his name. *Zeay, Zeay*—whines the petulant cry. Now you

BROWN THRASHER

CATBIRD

see him on the ground calmly looking for a grasshopper or daintily helping himself to a morsel from the dog's plate at the kitchen door. Suddenly, with a jerk and a jump, he has sprung into the air to seize a passing moth. There is always the pleasure of variety and the unexpected about the friendly, intelligent catbird.

He has a keen appetite for so many pests of the garden and orchard—moths, grasshoppers, beetles, caterpillars, spiders, flies and other insects—that his friendship is well worth cultivating. Five catbirds, whose diet was carefully watched by scientific men in Washington, ate thirty grasshoppers each for one meal.

How many people ignorantly abuse the catbird! Because he has the good taste to like strawberries and cherries as well as we do, is he to be condemned on that account? If he kills insects for us every waking hour from April to October, is he not entitled to a little fruit in June? The ox that treadeth out the corn is not to be muzzled. A good way to protect our strawberry patches and cherry trees from catbirds, mocking-birds, and robins, is to provide fruit that they like much better—the red mulberry. Nothing attracts so many birds to a place. A mulberry tree in the chicken-yard provides a very popular restaurant, not only for the song birds among the branches, but for the scratchers on the ground floor.

Like the yellow-breasted chat, the catbird likes to hide its nest in a tangle of cat brier along the roadside undergrowth and in bushy, woodland thickets. Last winter, when that vicious vine had lost every leaf, I counted in it eighteen catbird nests within a quarter of a mile along a country lane. Long before the first snowstorm, the inmates of those nests were enjoying summer weather

again from the Gulf states to Panama. If one nest should be disturbed in May or June, when the birds are raising their families, all the catbird neighbors join in the outcry of mews and cat-calls. Should a disaster happen to the parents, the orphans will receive food and care from some devoted foster-mother until they are able to fly.

The Mocking-bird

Length—9 to 10 inches. About the size of the robin.
Male and Female—Gray above; wings and wedge-shaped tail brownish; upper wing feathers tipped with white; outer tail quills white, conspicuous in flight; chin white; underneath light gray, shading to whitish.
Range—Peculiar to torrid and temperate zones of two Americas.
Migrations—No fixed migrations; usually resident where seen.

Ever alert, on the *qui vive*, the mocking-bird can no more suppress the music within him, night or day, than he can keep his slim, neat, graceful, nervous, high-strung body at rest. From his restlessness alone you might suspect he is the cousin of the catbird and brown thrasher and is closely related to the wrens. Flitting from perch to perch (fluttering is one of his chief amusements even in a cage); taking short flights from tree to tree, and so displaying the white signals on his wings and tail; hopping lightly, swiftly, gracefully, over the ground; bounding into the air, or the next minute shooting his ashy gray body far across the garden and leaving a wake of rippling music behind as he flies, he

seems to be perpetually in motion. If you live in the South you can encourage no more delightful and amusing neighbor than this star performer in the group of lively singers.

His love song is entrancing. "Oft in the stilly night," when the moonlight sheds a silvery radiance everywhere, the mocking-bird sings to his mate such delicious music as only the European nightingale can rival. Perhaps the stillness of the hour, the beauty and fragrance of the place where the singer is hidden among the orange blossoms or magnolia, increase the magic of his almost pathetically sweet voice; but surely there is no lovelier sound in nature on this side of the sea. Our poet Lanier declared that this "heavenly bird" will be hailed as "Brother" by Beethoven and Keats when he enters the choir invisible in the spirit world.

With all his virtues, it must be added, however, that this charming bird is a sad tease. There is no sound, whether made by bird or beast about him, that he cannot imitate so clearly as to deceive every one but himself. Very rarely can you find a mocking-bird without intelligence and mischief enough to appreciate his ventriloquism. Not only does he imitate but he invents all manner of quips and vocal jugglery.

When all the states make and enforce proper bird laws there will be an end to the barbaric slaughter of many innocents for no more worthy end than the trimming of hats for thoughtless women. Birds of bright plumage have suffered most, of course, but the mocking-birds' nests have been robbed for so many generations to furnish caged fledglings for both American and European bird dealers, that shot guns could have done no work more deadly. Where the people are too ignorant to understand what mocking-

birds are doing for them every day in the year by eating insects in their gardens, fields, and parks, they are shot in great numbers for the sole offence of helping themselves to a small fraction of the very fruit they have helped to preserve. Even the birds ought to have a "square deal" in free America.

CHAPTER V

THE WARBLERS

REDSTART—YELLOW-BREASTED CHAT—MARYLAND YELLOW-THROAT—OVEN-BIRD—BLACKBURNIAN WARBLER—CHESTNUT-SIDED WARBLER—MYRTLE WARBLER—YELLOW WARBLER—BLACK AND WHITE CREEPING WARBLER

The Redstart

Length—5 to 5.5 inches.

Male—In spring plumage: Head, neck, back, and middle breast glossy black. Breast and underneath white slightly flushed with salmon, increasing to bright salmon flame on the sides of the body and on the wing linings. Tail feathers partly black, partly flame, with broad black band across the end. Flame markings on wings. *In autumn:* Fading into rusty black, olive, and yellow.

Female—Olive-brown, and yellow where the male is salmon flame.

Young—Browner than the females.

Range—North America to upper Canada. West occasionally, as far as the Pacific Coast, but commonly found in summer in the Atlantic and Middle states.

Migrations—Early May. End of September. Summer resident.

When this exquisite little warbler flashes his brilliant salmon flame-and-black feathers among the trees, darting hither and thither, fluttering, spinning about in the air after insects caught chiefly on the wing, you will surely agree that he is the most beautiful as well as the most lively bird in the woods. The color scheme of his clothes suggests the Baltimore oriole's, only the feathers on the sides of his body, wings, and tail are a pinker shade of flame, and the black ones which cover his back, throat, and upper breast are more glossy, with bluish reflections. But you could not possibly mistake this lovely little sprite for the oriole, he is so much smaller—about an inch shorter than the sparrow. His cousin, the Blackburnian warbler, a rarer bird, with a color scheme of black, white, and beautiful rich orange, can be named instantly by the large amount of white in his tail feathers. There are so few brilliantly colored birds that find their way to us from the tropics, that it should not take long to know them. In Cuba the redstart is known as "El Candelita"—the little candle flame that flashes in the deep, dark, tropical forest. No wonder the Spaniards call all the gaily colored, tropical wood warblers "mariposas"—butterflies.

Who would believe that this small firebrand, half glowing, half charred, whirling about through the trees as if blown by the wind, is a cousin of the sombre oven-bird that walks so daintily and leisurely over the ground? The redstart keeps perpetually in motion that he may seize gnats and other gauzy-winged mouthfuls in mid-air—not as the flycatchers do, by waiting on a fence-rail or limb of a tree for a dinner to fly past, then dashing out and seizing it, but by flitting about constantly in search of insect prey. The redstart rarely rests on the trees longer than it takes to

snatch a morsel, erecting his tail, wren fashion, and sometimes spreading it, peacock fashion; then away he goes again.

The Yellow-breasted Chat

Length—7.5 inches. A trifle more than an inch longer than the English sparrow.

Male and Female—Uniform olive-green above. Throat, breast, and under side of wings bright, clear yellow. Underneath white. Sides grayish. White line over the eye, reaching to base of bill and forming partial eye-ring. Also white line on sides of throat. Bill and feet black.

Range—North America, from Ontario to Central America and westward to the plains. Most common in Middle Atlantic states.

Migrations—Early May. Late August or September. Summer resident.

"Now he barks like a puppy, then quacks like a duck, then rattles like a kingfisher, then squalls like a fox, then caws like a crow, then mews like a cat—*C-r-r-r-r-r-whrr*-that's it—*Chee-quack, cluck, yit-yit-yit-now*—hit it—*tr-r-r-r-wheu-caw-caw-cut, cut-tea-boy-who, who-mew, mew*," writes John Burroughs of this rollicking polyglot, the chat; but not even that close student of nature could set down on paper all the multitude of queer sounds with which the bird amuses himself. He might be mistaken for a dozen different birds and animals in as many minutes.

Only by creeping cautiously toward the roadside tangle, where this "rollicking polyglot" is entertaining himself and his mate, brooding over her speckled eggs in a bulky

nest set in a most inaccessible briery part of the thicket, can you hope to hear him rattle through his variety performance. Walk boldly or noisily past his retreat, and there is "silence there and nothing more." But two very bright eyes peer out at you through the undergrowth, where the trim bird watches you with quizzical suspicion until you quietly seat yourself and assume silent indifference. *Whew, whew!* he begins, and than he rattles off an indescribable, eccentric medley until your ears are tired listening. With bill uplifted, tail drooping, wings fluttering at his side, he cuts an absurd enough figure, but not so comical as when he rises into the air, trailing his legs behind him, stork-fashion. This surely is the clown among birds. But eccentric though he is, he is capable of great devotion and remains faithfully mated year after year. However much of a tease and a deceiver he may be to the passer-by along the roadside, in the privacy of the domestic circle he shows truly lovable traits.

He has the habit of singing in his unmusical way on moonlight nights. Probably his ventriloquial powers are cultivated not for popular entertainment, but to lure intruders away from his nest.

The Maryland Yellow-throat

Length—5.33 inches. An inch shorter than the English sparrow.

Male—Olive-gray on head, shading to olive-green on all the other upper parts. Forehead, cheeks, and sides of head black, like a mask, and bordered behind by a grayish line. Throat and breast bright yellow, growing steadily paler underneath.

Female—Either totally lacks black mask or its place is indicated by only a dusky tint. She is smaller and duller.
Range—Eastern North America, west to the Plains; most common east of the Alleghanies. Nests from the Gulf states to Labrador and Manitoba; winters south of Gulf states to Panama.
Migrations—May. September. Common summer resident.

This gay little warbler looks as if he were dressed for a masquerade ball with a gray-edged black mask over his face and the sides of his throat, a brownish green coat, and a bright yellow vest. How sharply the inquisitive fellow peers at you through his mask whenever you pass the damp thicket, bordering the marshy land, where he likes best to live! And how quickly he hops from twig to twig and flies from one clump of bushes to another clump, in restless, warbler fashion, as he leads you a dance in pursuit. Not for a second does he stop watching you.

If you come too close, a sharp *pit-pit* or *chock* is snapped out by the excited bird, whose familiar, oft-repeated, sprightly, waltzing triplet has been too freely translated, he thinks, into, *Fol-low-me, fol-low-me, fol-low-me.* Pursuit is the last thing he really desires, and of course he issues no such invitation. What he actually says sounds like *Witch-ee-tee, witch-ee-tee, witch-ee-tee.* You will surely hear him if you listen in his marshy retreats. He sings almost all summer and, at evening, adds a flight song to his repertoire. Except when nesting he comes into the garden, picks minute insects out of the blossoming shrubbery, hops about on the ground, visits the raspberry tangle, and hides among the bushes along the roadside. Only the

yellow warbler, of all his numerous tribe, is disposed to be more neighborly.

The little inconspicuous mate who bewitches him is not easily identified if he is not about. While he sings the "witchity" song she is busy carrying weeds, strips of bark, broad grasses, tendrils, reeds, and leaves for the outside of her deep cradle, and finer grasses for its lining, to a spot on the ground where plants and low bushes help conceal it. A favorite site is the heart of the skunk cabbage. She does not build so beautiful a nest as the yellow warbler, but, like her, she too, poor thing, sometimes suffers from the sneaking visits of the cowbird. Unhappily, she is not so clever as her cousin, for she meekly consents to hatch out the cowbird's egg and let the big, greedy interloper crowd and worry and starve her own brood.

The Oven-bird

Length—6 to 6.15 inches, about the size of an English sparrow.

Male and Female—Upper parts olive, with a dull orange V-shaped crown, bordered by black lines that converge toward the bill. Under parts white; breast spotted and streaked on the sides.

Range—United States to Pacific Slope.

Migrations—May. October. Common summer resident.

"Teacher—*Teacher*—Teacher—TEACHER—*TEACHER!*" resounds a penetrating accented voice from the woods. Who calls? Not an impatient scholar, certainly, but a shy little thrush-like warbler who has no use whatever for any human being, especially at the nesting

season in May and June, when he calls most loudly and frequently. Beginning quite softly, he gradually increases the intensity of each pair of notes in a crescendo that seems to come from a point much nearer than it really does. Once heard it is never forgotten, and you can always be sure of naming at least this bird by his voice alone. However, his really exquisite love song—a clear, ringing, vivacious melody, uttered while the singer is fluttering, hovering, high among the tree-tops—is rarely heard, or if heard is not recognized as the teacher's aerial serenade. He is a warbler, let it be recorded, who really can sing.

In the highest, driest parts of the wood, where the ground is thickly carpeted with dead leaves, you may some day notice a little bunch of them, that look as if a plant, in pushing its way up through the ground, had raised the leaves, rootlets, and twigs a trifle. Examine the spot more carefully, and on one side you find an opening, and within the ball of earth, softly lined with grass, lie four or five cream-white speckled eggs. It is only by a happy accident that this nest of the oven-bird is discovered. The concealment could not be better. It is this peculiarity of nest construction—in shape like a Dutch oven—that has given the bird what DeKay considers its "trivial name." Not far from the nest the parent birds scratch about in the leaves, like diminutive barnyard fowls, for the grubs and insects hiding under them. But at the first suspicion of an intruder their alarm becomes pitiful. Panic-stricken, they become fairly limp with fear, and drooping her wings and tail, the mother bird drags herself hither and thither over the ground. In happier moments they walk prettily, daintily, like a French dancing master, and nod their little heads as if marking time.

The Blackburnian Warbler

Length—4.5 to 5.5 inches. An inch and a half smaller than the English sparrow.

Male—Head black, striped with orange-flame; throat and breast orange, shading through yellow to white underneath; wings, tail, and part of back black, with white markings. White conspicuous in tail feathers.

Female—Olive-brown above, shading into yellow on breast, and paler under parts.

Range—Eastern North America to plains. Winter in tropics.

Migrations—May. September. Spring and autumn migrant.

No foliage is dense enough to hide, and no autumnal tint too brilliant to outshine this luminious little bird that in May, as it migrates northward to its nesting ground, darts in and out of the leafy shadows like a tongue of fire.

It is the most glorious of all the warblers—a sort of diminutive oriole, orange where the redstart is salmon, although novices sometimes confuse these two most tropical looking members of their family that visit us. The quiet-colored little mate of the Blackburnian warbler flits about after him, apparently lost in admiration of his fine feathers and the ease with which his thin tenor voice can end his fine lover's warble in a high Z.

Take a good look at this attractive couple, for in May they leave us to build a nest of bark and moss in the evergreens of Canada—that paradise for warblers—or of the Catskills and Adirondacks, and in autumn they hurry South to escape the first frosts.

The Chestnut-sided Warbler

Length—About 5 inches. More than an inch shorter than the English sparrow.

Male—Top of head and streaks in wings yellow. A black line running apparently through the eye and back of crown. Ear coverts, chin, and underneath white. Back greenish gray and slate, streaked with black. Sides of bird chestnut. Wings, streaked with black and yellow, have yellowish-white bars. Dark tail with white patches on inner vanes of the outer quills.

Female—Similar, but duller. Chestnut sides are often scarcely apparent.

Range—Eastern North America, from Manitoba and Labrador to the tropics, where it winters.

Migrations—May. September. Summer resident, most common in migrations.

In the Alleghanies, and from New Jersey and Illinois northward, this restless little warbler nests in the bushy borders of woodlands and the undergrowth of open woods, for which he forsakes our gardens and orchards after a very short visit in May. While hopping over the ground catching ants, of which he seems to be inordinately fond, or flitting actively about the shrubbery after grubs and insects, we may note the broad, reddish brown stripe on his sides, whereas the bay-breasted warbler, with which it is sometimes confused, has the crown, throat, and sides a rich chestnut. With drooped wings that often conceal the bird's chestnut sides, which are his chief distinguishing mark, and with tail erected like a redstart's, he hunts in-

cessantly. Here in the garden he is as refreshingly indifferent to your interest in him as later, in his breeding haunts, he is shy and distrustful. His song is bright and animated, like that of the yellow warbler.

The Myrtle Warbler

Length—5 to 5.5 inches. About an inch smaller than the English sparrow.

Male—*In summer plumage:* A yellow patch on top of head, lower back, and either side of the breast. Upper parts bluish slate, streaked with black. Upper breast black; throat white; all other under parts whitish, streaked with black. Two white wing-bars, and tail quills have white spots near the tip. *In winter:* Upper parts olive-brown, streaked with black; the yellow spot on lower back the only yellow mark remaining. Wing-bars grayish.

Female—Resembles male in winter plumage.

Range—Eastern North America. Occasional on Pacific Slope. Summers from Minnesota and northern New England northward to fur countries. Winters from Middle states southward into Central America; a few remaining at the northern United States all winter.

Migrations—April. October. November.

The first of the warblers to arrive in the spring and the last to leave us in the autumn, some even remaining throughout the northern winter, the myrtle warbler, next to the summer yellow-bird, is the most familiar of its multitudinous kin. We become acquainted with it chiefly in the migrations, when it impresses us by its numbers rather

than by gorgeousness of attire, although it is quietly beautiful. The four yellow spots on crown, lower back, and sides are its distinguishing marks; and in the autumn these marks have dwindled to only one, that on the lower back or rump. The great difficulty experienced in identifying any warbler is in its restless habit of flitting about.

If we look sharply into every group of myrtle warblers, we are quite likely to discover some of their dainty, fragile cousins that gladly seek the escort of birds so fearless as they. By the last of May all the warblers are gone from the neighborhood except the constant little yellow warbler, redstart, yellow-throat, oven-bird, and chat.

In autumn, when the myrtle warblers return after a busy enough summer passed in Canadian nurseries, they chiefly haunt those regions where juniper and bay-berries abound. These latter (*Myrica cerifera*), or the myrtle wax berries, as they are sometimes called, and which are the bird's favorite food, have given it their name. Wherever the supply of these berries is sufficient to last through the winter, there it may be found foraging in the scrubby bushes. Sometimes driven by cold and hunger from the fields, this hardiest member of a family that properly belongs to the tropics seeks shelter and food close to the outbuildings on the farm.

The Yellow Warbler

Length—4.75 to 5.2 inches. More than an inch shorter than the English sparrow.

Male—Upper parts olive-yellow, brightest on the crown; under parts bright yellow, streaked with reddish brown. Wings and tail dusky olive-brown, edged with yellow.

Female—Similar; but reddish-brown streakings less distinct.

Range—North America, except Southwestern states, where the prothonotary warbler reigns in its stead. Nests from Gulf states to fur countries. Winters south of the Gulf states, as far as northern parts of South America.

Migrations—May. September. Common summer resident.

Rather than live where the skies are gray and the air is cold, this adventurous little warbler, or summer yellowbird as he is often called, will travel two thousand miles or more to follow the sun. A trip from Panama to Canada and back again within five months does not appal him. By living in perpetual sunshine his feathers seemed to have absorbed some of it, so that he looks like a stray sunbeam playing among the shrubbery on the lawn, the trees in the orchard, the bushes in the roadside thicket, the willows and alders beside the stream. Although you may not get close enough to see that his yellow breast is finely streaked with reddish brown, you may know by these marks that he is not what you at first suspected he was—somebody's pet canary escaped from a cage.

Is there anybody living who could name at sight every one of the seventy warblers old and young, male and female, that visit the United States? Some of these birds, peculiarly American, are very gaily colored and exquisitely marked, as birds coming to us from the tropics have a right to be. Some are quietly clad; some, like the redstart, are dressed quite differently from their mates and young; others, like the yellow warbler, are so nearly alike that one

MOCKING—BIRD

REDSTART (Male above—Female below)

could see no difference between the male and female from the distance of a few feet. Some live in the tops of evergreens and other tall trees; others, like the Maryland yellow-throat, which seems to prefer low trees and shrubbery, are rarely seen more than twelve feet from the ground. A few, like the oven-bird, haunt the undergrowth in the woods or live most of the time on the earth. With three or four exceptions all the warblers dwell in woodlands, and it is only during the spring and autumn migrations that we have an opportunity to become acquainted with them; when they come about the orchard and shrubbery for a few days' rest and refreshment during their travels. Fortunately the cheerful little yellow warbler stays around our homes all summer long. Was there ever a family so puzzling and contradictory as the Warblers?

The great majority of these fascinating and exasperating relatives are nervous, restless little sprites, constantly flitting from branch to branch and from twig to twig in a never-ending search for small insects. As well try to catch a weasel asleep as a warbler at rest. People who live in the tropics, even for a little while, soon become lazy. Not so the warblers, whose energy, like a steam engine's, seems to be increased by heat. Of course they do not undertake long journeys merely for pleasure, as wealthy human tourists do. They must migrate to find food; and as insects are most plentiful in warm weather, you see why these atoms of animation keep in perpetual motion. They are among the last migrants to come North in the spring and among the first to leave in the autumn because few insects hatch out in cool weather, and the birds must always be sure of plenty to eat. Traveling as they do, chiefly by night, they are killed in numbers against the light-

houses and electric light towers which especially fascinate these poor little victims.

Who first misled us by calling these birds warblers? The truth is there is not one really fine singer, like a thrush, in the whole family. The yellow-breasted chat has remarkable vocal ability, but he is not a real musician like the mocking-bird. The warblers, as a rule, have weak, squeaky, or wiry songs and lisping *tseep* call notes. The yellow warbler sings as acceptably as most of his kin. Seven times he rapidly repeats: "*Sweet—sweet—sweet—sweet—sweet—sweeter-sweeter*" to his sweetheart, but this happy little love-maker's incessant song is apt to become almost tiresome to everybody except his mate.

What a clever little creature she is! More than any other bird she suffers from the persecutions of that dusky rascal, the cowbird. In May, with much help from her mate, she builds an exquisite little cradle of silvery plant fibre, usually shreds of milkweed stalk, grass, leaves, and caterpillars' silk, neatly lined with hair, feathers, and the downy felt of fern fronds. The cradle is sometimes placed in the crotch of an elder bush, sometimes in a willow tree; preferably near water where insects are abundant, but often in a terminal branch of some orchard tree.

Scarcely is it finished before the skulking cowbird watches her chance to lay an egg in it that she may not be bothered with the care of her own baby. She knows that the yellow warbler is a gentle, amiable, devoted mother, who will probably work herself to death, if necessary, rather than let the big baby cowbird starve. But she sometimes makes a great mistake in her individual. Not all yellow warblers will permit the outrage. They prefer to weave a new bottom to their nest, over the cowbird's

egg, although they may seal up their own speckled treasures with it. Suppose the wicked cowbird comes back and lays still another egg in the two-storied nest; what then? The little Spartan yellow bird has been known to weave still another layer of covering rather than hatch out an unwelcome, greedy interloper to crowd and starve her own precious babies. Two and even three-storied nests have been found.

Black and White Creeping Warbler

Length—5 to 5.5 inches. About an inch smaller than the English sparrow.

Male—Upper parts white, varied with black. A white stripe along summit of head and back of neck, edged with black. White line above and below eye. Black cheeks and throat, grayish in females and young. Breast white in middle, with black stripes on sides. Wings and tail rusty black, with two white cross-bars on former, and soiled white markings on tail quills.

Female—Paler and less distinct markings throughout.

Range—Eastern United States and westward to the Plains. North as far as the fur countries. Winters in tropics south of Florida.

Migrations—April. Late September. Summer resident.

Nine times out of ten this active warbler is mistaken for the little downy woodpecker, not because of his coloring alone, but also on account of their common habit of running up and down the trunks of trees and on the under side of branches, looking for insects, on which all the warblers subsist. But presently the true warbler char-

acteristic of restless flitting about shows itself. A woodpecker would go over a tree with painstaking, systematic care, while the black and white warbler, no less intent upon securing its food, hurries off from tree to tree, wherever the most promising menu is offered.

Clinging to the mottled bark of the tree trunk, like a nuthatch, it would be difficult to find him were it not for these sudden flittings and the feeble song, *Weachy, weachy, weachy, 'twee, 'twee, 'tweet,* he half lisps, half sings.

CHESTNUT–SIDED WARBLER (Male above—Female below)

CEDAR WAXWING

CHAPTER VI

THE VIREOS OR GREENLETS

Red-eyed Vireo—White-eyed Vireo—Yellow-throated Vireo—Warbling Vireo

When Dame Nature, the most thorough of housekeepers, gave to the birds the task of restraining insects within bounds so that man and beast could live, she gave the care of foliage to the vireos. It is true that most of the warblers, and a few other birds, too, hunt for their food among the leaves, but with nothing like the vireo's painstaking care and thoroughness. The nervous, restless warblers flit from twig to twig without half exploring the foliage; whereas the deliberate, methodical, and tamer vireos search leisurely above and below it, cocking their little heads so as to look up at the under side of the leaf above them and to peck off the destroyers hidden there—bugs of many kinds and countless little worms, caterpillars, weevils, inch-worms, May beetles, and leaf-eating beetles. Singing as they go, no birds more successfully combine work and play.

Because they spend their lives among the foliage, the vireos are protectively colored, with soft grayish or olive-green on their backs, wings, and tail, whitish or yellow below. Some people call them greenlets. They are all a

little smaller than sparrows. More inconspicuous birds it would be hard to find or more abundant, although so commonly overlooked except by people on the lookout for them. Where the new growth of foliage at the ends of the branches is young and tender, many insects prefer to lay their eggs that their larvæ may have the most dainty fare as soon as they are hatched. They do not reckon upon the vireo's visits.

Toward the end of April or the first of May, these tireless gleaners return to us from Central and South America where they have spent the winter, which of course is no winter on the other side of the equator, but a continuation of summer for them. Competition for food being more fierce in the tropics than it is here, millions of birds besides the warblers and vireos travel from beyond the Isthmus of Panama to the United States and back again every year in order that they may live in perpetual summer with an abundance of food. If any one thinks that birds are mere creatures of pleasure, who sing to pass the time away, he doesn't begin to understand how hard they must work for a living. They cannot limit their labors to an eight-hour day. However, they keep cheerful through at least sixteen busy hours.

The Red-eyed Vireo

Length—5.75 to 6.25 inches. A fraction smaller than the English sparrow.

Male and Female—Upper parts dull, light olive-green; well-defined slaty gray cap, with black marginal line, below which, and forming an exaggerated eyebrow, is a line of white. A brownish band runs from base of bill apparently through the eye. The iris is ruby-red. Under-

neath white, shaded with light greenish yellow on sides and on under tail and wing coverts.

Range—United States to Rockies and northward. Winters in Central and South America.

Migrations—April. October. Common summer resident.

Almost everywhere in the eastern United States and Canada, the red-eyed vireo is the most common member of his family. The only individual touch to his costume that helps to distinguish him is a gray cap edged with a black line which runs parallel to his conspicuous white eyebrow.

Listen to the preacher! You have no need to meet him face to face in order to know him: *You see it—you know it—do you hear me?—do you believe it?* he propounds incessantly through the long summer days, even after most other birds are silent. You cannot mistake his declamatory voice. With a rising inflection at the end of each short, jerky sentence, he asks a question very distinctly and sweetly, then pauses an instant as if waiting for a reply—an unusually courteous orator. His monotonous monologue, repeated over and over again, comes to us from the elms and maples in the village street, the orchard, and woodland, where he keeps steadily and deliberately at work. Just as some boys say they can whittle better if they whistle, so vireos seem to hunt more thoroughly if they sing.

Vireos are remarkably fine builders—among the very best. Although their nests are not so deep as the Baltimore orioles', the shape and weave are similar. The red-eye usually prefers to swing her cradle from a small crotch

in an oak or apple tree or sapling, and securely lace it through the rim on to the forked twigs. Nests vary in appearance, but you will notice that these weavers show a preference for dried grass as a foundation into which are wrought bits of bark, lichen, wasps' nest "paper," spider web, plant down, and curly vine tendrils.

The White-eyed Vireo

It is not often that one can get close enough to any bird to see the white of his eyes, but the brighter olive-green of this vivacious little white-eyed vireo's upper parts, its white breast faintly washed with yellow on the sides, and the two yellowish white bars on its wings help one to recognize it.

"Pertest of songsters," the white-eyed vireo makes whatever neighborhood it enters lively at once. Taking up a residence in the tangled shrubbery or thickety undergrowth, it immediately begins to scold like a crotchety old wren. Its half-muffled, cackling soliloquies reflect irritation over the merest trifles—a passing bumblebee, a visit from another bird to its tangle, an unsuccessful peck at a gnat—anything seems liable to rouse its wrath, while it sharply snaps out what might perhaps be freely constructed into "cuss-words." *Now, who are you, eh?* its five-syllabled "song" unsociably seems to inquire.

The inconspicuous little bird has a strong, decided character. The precious nest, so jealously guarded, is a deeper cup that that of the vireo with the ruby-red eye, deeper than that of any of the other vireos, and it usually contains three favorite materials in addition to those gen-

erally chosen by them: they are bits of wood usually stolen from some woodpecker's hole, shreds of paper, and yards and yards of fine caterpillar silk, by which the nest is hung from its slender fork in the thicket. It also contains, not infrequently, alas! a cowbird's most unwelcome egg. The inscrutable mystery is that this vireo permits the lazy cowbird to deposit an egg in its nest, and will patiently sit upon it, though it is as large as three of her own tiny eggs; and when the little interloper comes out from his shell the foster-mother will continue to give it the most devoted care long after it has shoved her poor little starved babies out of the nest to meet an untimely death in the smilax thicket below. She should take a lesson from the clever yellow warbler.

The Yellow-throated Vireo

In a family not conspicuous for its fine feathers, this is certainly the beauty. The clear lemon-yellow worn at its throat spreads over its vest; its coat is a richer and more yellowish green than the other vireos wear, and its two white wing-bars are as conspicuous as the white-eyed vireo's. Moreover, its mellow and rich voice, like a contralto's, is raised to a higher pitch at the end of a sweetly sung triplet. *See me; I'm here; where are you?* the singer inquires over and over again from the trees in the woodland, or perhaps in the village when nesting duties are not engrossing. Don't mistake it for the chat simply because its throat is yellow.

As this is the beauty of the modest family, so is it also the best nest builder. Its pensile cradle, of exquisite workmanship, frequently hangs from the crotch of some slender tree near water

The Warbling Vireo

High up in the tops of elms and maples that line village streets where the red-eyed vireo loves to hunt, even among the trees of so busy a thoroughfare as Boston Common, an almost continuous warble in the early summer indicates that some unseen singer is hidden there; but even if you get a glimpse of the warbling vireo you could not tell him from his red-eyed cousin at that height. Modestly dressed, without even a white eyebrow or wing-bars to relieve his plain dusty olive and whitish clothes, he is the least impressive member of his retiring, inconspicuous family. He asks you no questions in jerky, colloquial triplets of song, so you may know by his voice at least that he is not the red-eyed vireo. Some self-conscious birds, like the song sparrow, mount to a conspicuous perch before they begin to sing, as if they had to deliver a distinct number on a programme before a waiting audience. Not so with this industrious little gleaner to whom singing and dining seem to be a part of the same performance—one and inseparable. He sings as he goes, snatching a bit of insect food between warbles.

Although towns do not affright him, he really prefers wooded borderland and clearings, especially where birch trees abound, when it is time to rear a family.

CHAPTER VII

BIRDS NOT OF A FEATHER

Two Shrikes or Butcher Birds—Cedar Waxwing—Two Tanagers

The Loggerhead Shrike

Length—8.5 to 9 inches. A little smaller than the robin.
Male and Female—Upper parts bluish, ashy gray; narrow black line across forehead connecting small black patches on sides of head at base of bill. Wings and tail black, plentifully marked with white, the outer tail feathers often being entirely white and conspicuous in flight. Underneath white or very light gray. Bill hooked and hawk-like.
Range—Eastern United States to the Plains.
Migrations—May. October. Summer resident.

The Northern Shrike

Length—9.5 to 10.5 inches. About the size of the robin.
Male—Upper parts slate-gray; wing quills and tail black, edged and tipped with white, conspicuous in flight; a white spot on centre of outer wing feathers. A black band runs from bill, through eye to side of throat. Light gray below, tinged with brownish, and faintly marked

with waving lines of darker gray. Bill hooked and hawk-like.

Female—With eye-band more obscure than male's, and with more distinct brownish cast on her plumage.

Range—Northern North America. South in winter to middle portion of United States.

Migrations—November. April. A roving winter resident.

Is it not curious that among our so-called song birds there should be two harsh-voiced ones, about the size of robins, the loggerhead and the northern shrike, with the hawk-like habit of killing little birds and mice, and the squirrel's and blue jay's trick of storing what they cannot eat? They are butchers, with the thrifty custom of hanging up their meat, which only improves in flavor and tenderness after a day or two of curing. Then, even if storms should drive their little prey to shelter and snow should cover the fields, they need not worry nor starve, seeing an abundance in their larder provided for the proverbial rainy day.

In the Southern and Middle states, where the smaller loggerhead shrike is most common, some say he looks like a mocking bird; but the feathers on his back are surely quite a different gray, a light bluish ash, and pearly on his under parts, with white in his black wings and tail which is conspicuous as he flies. His powerful head, which is large for his size, has a heavy black line running from the end of his mouth across his cheek, and his strong bill has a hook on the end which is useful in tearing the flesh from his victim's bones. He really looks like nothing but just what he is—a butcher-bird.

See him, quiet and preoccupied, perched on a telegraph

SCARLET TANAGER (Female above—Male below)

SWALLOW (Female above—Male below)

pole on the lookout for a dinner! A kingbird, or other flycatcher which chooses similar perches, would sail off suddenly into the air if a winged insect hove in sight, snap it up, make an aerial loop in its flight, and return to its old place. Not so the solitary, sanguinary shrike. When his wonderfully keen eyes detect a grasshopper, a cricket, a big beetle, a lizard, a little mouse, or a sparrow at a distance in a field, he drops like an eagle upon the victim, seizes it with his strong beak, and flies with steady flapping strokes of the wings, close along the ground, straight to the nearest honey locust or spiny thorn; then rises with a sudden upward turn into the tree to impale his prey. Hawks, which use the same method of procuring food, have very strong feet; their talons are of great help in holding and killing their victims; but the shrikes, which have rather weak feet for perching only, are really compelled in many cases to make use of stout thorns or sharp twigs to help them quiet the struggles of their victims. Weather-vanes, lightning rods, bare branches, or the outermost or top branches of tall trees, high poles, and telegraph wires, which afford a fine bird's-eye view of the surrounding hunting ground, are favorite points of vantage for both shrikes. When it is time to husk the corn, every farmer must have seen a shrike sitting on a fence-rail or hovering in the air ready to seize the little meadow mice that escape from the shocks.

Shrikes also sneak upon their prey. When they resort to this mean method of securing a dinner they leave the high perches and secrete themselves in clumps of bushes in the open field. Luring little birds within striking distance by imitating their call-notes, they pounce upon a terror-stricken sparrow before you could say "Jack Robinson."

Shrikes seem to be the only creatures that really rejoice in the rapid increase of English sparrows. In summer they prefer large insects, especially grasshoppers, but in winter, when they can get none, they must have the fresh meat of birds or mice. At any season they deserve the fullest protection for the service they do the farmer. Shrikes kill only that they themselves may live, and not for the sake of slaughter, which is a so-called sport reserved for man alone, who, in any case, should be the last creature to condemn them.

The loggerhead's call-notes are harsh, creaking, and unpleasant, but at the approach of the nesting season he proves that he really can sing, although not half so well as his cousin, the northern shrike, who astonishes us with a fine song some morning in early spring. Before we become familiar with it, however, the wandering minstrel is off to the Far North to nest within the arctic circle. It is only in winter that the northern shrike visits the United States, traveling as far south as Virginia and Kansas between October and April.

The Cedar Waxwing

Length—7 to 8 inches. About one-fifth smaller than the robin; larger than the sparrow.

Male—Upper parts rich grayish brown, with plum-colored tints showing through the brown on crest, throat, breast, wings, and tail. A velvety black line on forehead runs through the eye and back of crest; chin black. Crest conspicuous; breast lighter than the back, and shading into yellow underneath. Wings have quill-shafts of secondaries elongated, and with brilliant vermilion tips

like drops of sealing-wax, rarely seen on tail quills, which have yellow bands across the end.

Female—With duller plumage, smaller crest, and narrower tail-band.

Range—North America, from northern British provinces to Central America in winter.

Migrations—A roving resident, without fixed seasons for migrating.

So few birds wear their head feathers crested that it is a simple matter to name them by their top-knots alone, even if one did not see the gray plumage of the little tufted titmouse, the dusky hue of the crested flycatcher, the blue of the jay and the kingfisher, the red of the cardinal, and the richly shaded grayish brown of the cedar waxwing, which is, perhaps, the most familiar of them all. His neat and well-groomed plumage is fine and very silky, almost dove-like in coloring, and although there are no gaudy features about it, few birds are so exquisitely dressed. The pointed crest, which rises and falls to express every passing emotion, and the velvety black chin, forehead, and line running apparently through the eye, give distinction to the head. The tail has a narrow yellow band across its end, and on the wings are the small red spots like sealing-wax that are responsible for the bird's queer name.

It is difficult to think of a single bird when one usually sees a flock. Sociable to a degree, the waxwings rove about a neighborhood in scattered companies, large and small, to feed on the cedar or juniper berries, choke berries, dogwood, and woodbine berries, elder, haw, and other small wild fruits on which they feed very greedily; then move on

to some other place where their favorite fruit abounds. Happily, they care very little about our cultivated fruit and rarely touch it. A good way to invite many kinds of birds to visit one's neighborhood is to plant plenty of berry-bearing trees and shrubs. The birds themselves plant most of the wild ones, by dropping the undigested seeds far and wide. How could the seeds of many species be distributed over thousands of miles of land without their help? Cedarbirds are responsible for no small part of the beauty of the lanes and hedgerows throughout their wide range from sea to sea and from Canada to Mexico and Central America. Nature makes her creatures work for her, whether they know they are helping her plans or not.

When a flock of cedarbirds enters a neighborhood, there is no noisy warning of their coming. Gentle, refined in manners, courteous to one another, almost silent visitors, they sit for hours nearly motionless in a tree while digesting a recent feast. An occasional bird may shift his position, then, politely settling himself again without disturbing the rest of the company, remain quiet as before. Lisping, *twee-twee-zee* call-notes, like a hushed whispered whistle, are the only sounds the visitors make. How different from a roving flock of screaming, boisterous blue jays!

When rising to take wing, the squad still keeps together, flying evenly and swiftly in close ranks on a level with the tree-tops along a straight course; or, wheeling suddenly, the birds dive downward into a promising, leafy restaurant. Enormous numbers of insects are consumed by a flock. The elm-beetle, which destroys the beauty, if not the life, of some of our finest shade trees, would be exterminated if there were cedarbirds enough. One flock

PURPLE MARTIN (Female above—Male below)

TREE SWALLOW (Male above—Female below)

within a week rid a New England village of this pest that had eaten the leaves on the double row of elms which had been the glory of its broad main street for more than a hundred years. When you see these birds in an orchard, look for better apples there next year. Cankerworms are a *bonne bouchée* to them; so are grubs and caterpillars, especially cutworms.

Some time after all the other birds, except the tardy little goldfinch, have nested, the waxwings give up the flocking habit and live in pairs. Toward the end of June, when many birds are rearing the second brood, a couple begin to carry grass, shreds of bark, twine, fine roots, catkins, moss, or rags—any or all of these building materials—to some tree, usually a fruit tree or a cedar which is ever their favorite; and then, let it be observed, what is not always the case with humans—the birds' manners at home are even better than when moving in society abroad. The devoted male brings dainties to his brooding mate and helps her feed the family.

The Scarlet Tanager

Length—7 to 7.5 inches. About one fourth smaller than the robin.

Male—In spring plumage: Brilliant scarlet, with black wings and tail. Under wing coverts grayish white. *In autumn:* Similar to female.

Female—Olive above; wings and tail dark, lightly margined with olive. Underneath greenish yellow.

Range—North America to northern Canada boundaries, and southward in winter to South America.

Migrations—May. October. Summer resident.

The gorgeous coloring of the scarlet tanager has been its snare and destruction. The densest evergreens could not altogether hide this blazing target for the sportsman's gun, too often fired at the instigation of city milliners. "Fine feathers make fine birds"—and cruel, silly women, the adage might be adapted for latter-day use. This rarely beautiful tanager, thanks to them, is now only an infrequent flash of beauty in our countryside.

Instinct leads it to be chary of its charms; and whereas it used to be one of the commonest of bird neighbors, it is now shy and solitary—a frequenter of woodlands. An ideal resort for it is a grove of oak or swamp maple near a stream or pond where it can bathe.

High in the tree-tops he perches, all unsuspected by the visitor passing through the woods below, until a burst of rich, sweet, mellow melody directs the field-glasses suddenly upward. There we detect him carolling loudly and cheerfully, an apparition of beauty. Because of their similar coloring, the black-winged scarlet tanager and the all-red crested cardinal are sometimes confounded, but an instant's comparison of the two birds shows nothing in common except red feathers, and even those of quite different shades. The inconspicuous olive-green and yellow of the female tanager's plumage is another striking instance of Nature's protective coloration; for if our bright-colored birds have become shockingly few under existing conditions, would any at all remain were the females prominent, like the males, as they brood upon the nest? Both tanagers construct a rather disorderly looking nest of fibres and sticks, through which daylight can be seen, where it rests securely upon a low horizontal branch of some oak or pine tree; but as soon as three or four bluish-

green eggs have been laid in the cradle, off goes the male, wearing his tell-tale coat, to a distant tree. There he *chip-churrs* by the hour and sings his sweetest carol to the patient, brooding mate, returning to her side only long enough to feed her with the insects and berries that form their food.

Happily for the young birds' fate, they are clothed at first in dull colors, and later with only here and there a bright touch of scarlet, to prove their claim to the parent whose gorgeous plumage must be their admiration. But after the moulting season it would be a wise tanager that knew its own father. His scarlet feathers are now replaced by an autumn coat of olive and yellow not unlike his mate's.

The Summer Tanager

Length—7.5 inches. About one-fourth smaller than the robin.

Male—Uniform red. Wings and tail like the body.

Female—Upper parts yellowish olive-green; underneath inclining to yellow.

Range—Tropical portions of two Americas and eastern United States. Most common in Southern states. Rare north of Pennsylvania. Winters in the tropics.

Migrations—In Southern states: April. October. Irregular migrant north of the Carolinas.

Thirty years ago, it is recorded that so far north as New Jersey the summer redbird was quite as common as any of the thrushes. In the Southern states it is still one of the most familiar birds in the orange groves, orchards, and woods, especially *open* woods of pine and oak. It, too, is

a "smooth-headed redbird," but fire-red all over, without a black feather on him whereby he may be readily distinguished from the black-winged scarlet tanager.

Of the three hundred and fifty species of tanagers in the tropics, only two think it worth while to visit the eastern United States and one of these adventurous ones, the scarlet tanager, frequently suffers because he starts too early. If all should suddenly decide to come North some spring and spend the summer, our woods would be filled with some of the most brilliant and gorgeous birds in the world.

CHAPTER VIII

THE SWALLOWS

PURPLE MARTIN—BARN SWALLOW—CLIFF OR EAVES SWALLOW—BANK SWALLOW—TREE SWALLOW

Apparently there could be no way of earning a living more delightful for a bird than sailing about in the air all day, playing cross-tag on the wing with its companions, skimming low across the meadows, ponds, and marshes, or rising high above them and darting hither and thither wherever fancy leads, without knowing what it means to feel tired. Swallows are as much in their element when in the air as fish are in water; but of course they are not there simply for fun. Their long, blade-like wings, which cut the air with such easy but powerful strokes, propel them enormous distances before they have collected enough mosquitoes, gnats, and other little gauzy-winged insects to supply such great energy and satisfy their hunger. With mouth widely gaping, leaving an opening in the front of their broad heads that stretches from ear to ear, they must get a tremendous draft down their little throats, but they gather in a dinner piecemeal just as the chimney-swift, whippoorwill, and nighthawk do. Viscid saliva in the bird's mouth glues the little victims as fast as if they were caught on sticky fly-paper; then, when enough have been trapped to make a pellet, the swallow swallows them in a

ball, although one swallow does not make a dinner, any more than one swallow makes a summer.

These sociable birds delight to live in companies, even during the nesting season when most feathered couples, however glad to flock at other times, prefer to be alone. As soon as the young birds can take wing, one family party unites with another, one colony with another, until often enormous numbers assemble in the marshes in August and September. You see them strung like beads along the telegraph wires, perched on the fences, circling over the meadows and ponds, zigzagging across the sky. Millions of swallows have been noted in some of these autumnal flocks. Usually they go to sleep among the reeds and grasses in a favorite marsh where the bands return year after year; but some prefer trees. Comparatively little perching is done except at night, for swallows' feet are very small and weak.

At sunrise, the birds scatter in small bands to pick up on the wing the long-continued meal, which lasts till late in the afternoon. Those who have gone too far abroad and must travel back to the roost after sundown shoot across the sky with incredible swiftness lest darkness overtake them. Relying upon their speed of flight to carry them beyond the reach of enemies, they migrate boldly by daylight instead of at night as the timid little vireos, warblers, and many other birds do. During every day the swallows are with us they must consume billions of blood-sucking insects that would pester other animals besides ourselves. Think of the mosquito bites alone that they prevent! Every one of us is greatly in their debt.

Male and female swallows are dressed so nearly alike that one must know them very well indeed to tell one from the

other, even when they are close at hand. Both twitter merrily but neither really sings.

More than any other bird family, and more rapidly, the swallows are becoming dependent for shelter upon man.

The Purple Martin

Length—7 to 8 inches. Two or three inches shorter than the robin.

Male—Rich glossy black with bluish and purple reflections; duller black on wings and tail. Wings rather longer than the tail, which is forked.

Female—More brownish and mottled; grayish below.

Range—Peculiar to America. Penetrates from Arctic Circle to South America.

Migrations—Late April. Early September. Summer resident.

There is a picturesque old inn beside a post road in New Jersey with a five-storied martin house set up on a pole above its quaint swinging sign. For more than thirty years a record was kept on the pole showing the dates of the coming and going of the martins in April and September, which did not vary by more than two or three days during all that time. The inn-keeper locked up in his safe every night the registers on which were entered the arrivals and departures of his human guests, but he valued far more the record of his bird visitors which interested everybody who stopped at his inn.

One day, while he was away, a man who was painting a fence for him thought he would surprise him by freshening

up the old, weatherbeaten pole. Alas! He painted over every precious mark. You may be sure the surprise recoiled upon him like a boomerang when the wrathful innkeeper returned. However, the martins continue to come back to their old home year after year and rear their broods on little heaps of leaves in every room in the house, which is the cheering fact of the sad story.

These glossy, blue-black iridescent swallows, grayish white underneath, the largest of their graceful tribe, have always been great favorites. Even the Indians in the Southern states used to hang gourds for them to nest in about their camps—a practice continued by the Negroes around their cabins to this day. Strangely enough these birds which nested and slept in hollow trees before the coming of the white men, were among the first to take advantage of his presence. Now, in the eastern United States, at least, the pampered darlings of luxury positively refuse to live where people do not put up houses for their comfort. In the sparsely settled West, however, they still condescend to live in trees, but only when they must, like the chimney-swifts, which, by the way, are not related. People persist in calling them chimney swallows, which is precisely what they are not. Not even the little house wren has adapted itself so quickly to civilized men's homes as the swift and purple martin.

Intelligent people, who are only just beginning to realize what birds do for us and how very much more they might be induced to do, are putting up boxes for the martins, not only near their own houses, that the birds may rid the air of mosquitoes, but in their gardens and orchards that incalculable numbers of injurious pests in the winged stage may be destroyed. When martins return to us in spring

from Central and South America, where they have passed the winter, insects are just beginning to fly, and if they can be captured then, before they have a chance to lay their eggs, how much trouble and money are saved for the farmers by their tireless allies, the swallows. Unfortunately, purple martins are not so common at the North as they were before the coming of those saucy little immigrants, the English sparrows, who take possession, by fair means or by foul, of every house they can find. In the South, where the martins are still very numerous, a peach grower has set up in his orchard rows of poles, with a house on each, either for them or for the equally useful bluebirds. He says these bird partners are of inestimable value in keeping his fruit trees free from insects. The curculio, one of the worst enemies every fruit grower has to fight, destroying as it does millions of dollars' worth of crops every year, is practically unknown in that Georgia planter's orchard. Some day farmers all over the United States will wake up and copy his good idea.

A colony of martins circling about a house give it a delightful, home-like air. Their very soft, sweet conversation with one another as they fly, sounds like rippling, musical laughter.

Barn Swallow

Length—6.5 to 7 inches. A trifle longer than the English sparrow. Apparently considerably larger, because of its wide wing-spread.

Male—Glistening steel-blue shading to black above. Chin, breast, and underneath bright chestnut-brown and brilliant glistening buff. A partial collar of steel-blue. Tail very deeply forked and slender.

Female—Smaller and paler, with shorter outer tail feathers, making the fork less prominent.

Range—Throughout North America. Winters in tropics of both Americas.

Migrations—April. September. Summer resident.

Happily, the beautiful barn swallow is too familiar to need description. Wheeling about our barns and houses, skimming over the fields, flashing in the sunlight, playing "cross tag" with its friends at evening, when the insects, too, are on the wing, gyrating, darting, and gliding through the air, it is no more possible to adequately describe the exquisite grace of a swallow's flight than the glistening buff of its breast. The deep fork in his tail enables him to steer himself with those marvellously quick, erratic turns, which make his course through the air resemble forked lightning. But with what exquisite grace he can also glide and skim across the water, fields, and meadows without an apparent movement of the wing! His flight seems the very poetry of motion. The ease of it accounts for the very wide distribution of barn swallows from southern Brazil in winter to Greenland and Alaska in summer. What a journey to take twice a year! But it is as easy for them, perhaps, as is the full-fed millionaire's annual flitting to Palm Beach.

High up on some beam, too high for the children to reach let us hope, a pair of barn swallows will plaster their mud cradle. Perhaps the only time one can ever catch them with their feet on the earth is when they are gathering pellets of wet soil in their bills at some roadside puddle. Each mud pill must be carried to the barn and fastened on to the rafter. Countless trips are made to the puddle

before a sufficient number of pellets are worked into the deep mud walls of the ample nursery. Usually grass is mixed with the mud, but some swallows make their bricks without straw. A lining of fine hay and plenty of feathers from the chicken yard seem to be essential for their comfort, which is a pity, because almost always chicken feathers are infested with lice, and lice kill more young birds than we like to think about. When there is a nestful of fledglings to feed, sticky little pellets of insects, caught on the wing, are carried to them by both parents from daylight to dusk.

The Cliff or Eaves Swallow

The barn swallow, as we have seen, chooses to nest upon the rafters inside the barn, but the eaves swallow is content to stay outside under the shelter of a projecting roof. Before men built barns on this continent, the nest was cemented to the face of a cliff and in some regions still the bird is known as the cliff swallow. In such a place you find not one, but several or many queer mud tenements plastered in a row against the wall, for eaves swallows are always remarkably sociable, even at the nesting season. A photograph of a colony in Ohio shows one hundred and fifteen nests nearly all of which touch one another. The entrance to the flask-shaped nest is long drawn out and small.

Although so often noticed circling about outbuildings on the farm, one may know by the rusty patch on the lower part of his steel-blue back, the crescent-shaped white mark on his forehead, and the notched, not deeply forked tail, that the eaves swallow is not the barn swallow, which it otherwise resembles.

The Bank Swallow

Perhaps you have seen a sand bank somewhere, prooably near a river or pond, where the side of the bank was filled with holes as if a small cannon had been trained against it as a target. In and out of the holes fly the smallest of the swallows, that are sometimes, with good reason, called sand martins. No lovely metallic blue or glistening buff adorns their dull plumage, which is plain brownish gray above, white underneath, with a grayish band across the breast. Only their cousin, the rough-winged swallow, whose breast is brownish gray, is so plainly dressed.

The giggling twitter of the bank swallows as they wheel and dart through the air proves that they are never too busy hunting for a dinner to speak a cheerful word to their friends. Year after year a colony will return to a favorite bank, whose face has been honeycombed with such care. Think of the labor and patience required for so small a bird to dig a tunnel two feet deep, more or less, and enlarged at the far end! Some nests have been placed as far as four feet from the entrance. One is not surprised at the big kingfisher, who also tunnels a hole in a bank for his family, because his long, strong bill makes digging comparatively easy; but for the small, weak-footed swallow, the performance is remarkable.

The Tree Swallow

Probably this is the most abundant swallow that we have; certainly countless numbers assemble every year in the Long Island and Jersey marshes, and perch on the tele-

graph wires, dashing off for an insect suddenly as if they had received an electric shock. They skim, with much circling, above the meadows and streams in a perfect ecstasy of flight. At a little distance the bird appears to be black above and white below, but as he suddenly wheels past, you see that his coat is a lustrous, dark steel-green. Immature birds are brownish gray. All have white breasts, and are frequently referred to as white-breasted swallows.

As these swallows are the only members of their family to spend the winter in the southeastern United States, they can easily arrive at the North some time before their relatives from the tropics overtake them. And they are the last to leave. Myriads remain in the vicinity of New York until the middle of October. There is plenty of time to rear two broods, which accounts for the great size of the flocks. By the Fourth of July the young of the first broods are off hunting for little gauzy-winged insects over the low lands; and about a month later the parents join their flock, bringing with them more youngsters than you could count. They sleep every night in the marshes, clinging to the reeds.

Like the cliff swallow, the tree swallow is fast losing the right to its name. It takes so kindly to the boxes we set up for martins, bluebirds, and wrens that, where sparrows do not interfere, it now prefers them to the hollow trees, which once were its only shelter. But some tree swallows still cling to old-fashioned ways and at least rest in hollow trees and stumps, even if they do not nest in them. Some day they may become as dependent upon us as the martins and, like them, refuse to nest where boxes are not provided.

CHAPTER IX

THE COMPREHENSIVE SPARROW TRIBE AND SOME OF ITS MULTITUDINOUS KIN

INDIGO BUNTING — ROSE-BREASTED GROSBEAK — CARDINAL—TOWHEE—JUNCO—SNOWFLAKE — FOX SPARROW — SONG SPARROW — SWAMP SPARROW — FIELD SPARROW — CHIPPING SPARROW — TREE SPARROW—WHITE-THROATED SPARROW — WHITE-CROWNED SPARROW—ENGLISH SPARROW—VESPER SPARROW—GOLDFINCH—PURPLE FINCH

Like the poor, sparrows are always with us. A forced familiarity with mischief-making members of the class has bred contempt for them, even among many bird lovers. There is not a day in the year when you cannot find at least one member of the great tribe which comprises one seventh of all our birds—by far the largest North American family. What is the secret of their triumphant numbers?

Many members of the hardy prolific clan, wearing dull brown and gray-streaked feathers, in perfect color harmony with the grassy, bushy places or dusty roadsides where they live, are usually overlooked by enemies in search of a dinner. Undoubtedly their protective coloring has much to do with their increase. They are small birds mostly, not one so large as a robin.

Sparrows being seed eaters chiefly, although none of the

tribe refuses insect meat in season, and all give it to their nestlings, there is never a time when they cannot find food even at the frozen North where some weedy stalks project above the snow. They are not fastidious. Fussy birds, like fussy people, have a hard time in this world; but the whole sparrow tribe, with few exceptions, make the best of things as they find them and readily adapt themselves to whatever conditions they meet. How wonderfully that triumphant little immigrant, the English sparrow, has adjusted himself to this new land!

Members of the more aristocratic finch, bunting, and grosbeak branches of the family, however, who wear brighter clothes, pay the penalty with decreasing numbers as our boasted civilization surrounds them. Gay feathers afford a shining mark. Naturally birds of bright feather prefer to live among protective trees. They are delightful singers, and so, indeed, are some of their plain little sparrow cousins.

Not alone the grosbeaks, but all the members of the family, have strong, conical bills well suited to crush seeds, and gizzards, like a chicken's, to grind them fine. These little grist-mills within the birds' bodies extract all the nourishment there is from the seed. The sparrow tribe do immense service by destroying the seeds of weeds, which, but for them, would quickly overrun the farmer's fields and choke his crops. Because these hardy gleaners can pick up a living almost anywhere, they do not need to make very long journeys every spring and autumn. Their migrations are comparatively short when undertaken at all. As a rule their flight is labored, slow, and rather heavy—just the opposite of the wonderfully swift and graceful flight of the swallows.

The Indigo Bunting

Length—5.5 to 6 inches. Smaller than the English sparrow.
Male—Rich blue, with verdigris tints; deepest on head. Wings, tail, and lower back with brownish wash, most prominent in autumn plumage. Quills of wings and tail deep blue, margined with light.
Female—Brown above; yellowish on breast, shading to white underneath, and indistinctly streaked. Wings and tail darkest, sometimes with slight tinge of blue in outer webs and on shoulders.
Range—North America, from Hudson Bay to Panama. Most common in eastern part of United States. Winters in Central America and Mexico.
Migrations—May. September. Summer resident.

The "glowing indigo" of this tropical-looking visitor that so delighted Thoreau in the Walden woods, often seems only the more intense by comparison with the blue sky, against which it stands out in relief as the bird perches, singing, in a low tree-top. What has this gaily dressed, dapper little cavalier in common with his dingy sparrow cousins that haunt the ground and delight in dust-baths, leaving their feathers no whit more dingy than they were before, and in temper, as in plumage, suggesting more of earth than of heaven? Apparently he has nothing, and yet the small brown bird in the roadside thicket, which you have misnamed a sparrow, not noticing the glint of blue in her shoulders and tail, is his mate. Besides the structural resemblances, which are, of course, the only ones considered by ornithologists in classifying birds, the indigo buntings have several sparrow-like traits. They feed

CARDINAL (Male above—Female below)

TOWHEE (Male left—Female right)

upon the ground, mainly upon seeds of grasses and herbs, with a few insects interspersed to give relish to the grain; they build grassy nests in low bushes or tall, rank grass; and their flight is short and labored. Borders of woods, roadside thickets, and even garden shrubbery, with open pasture lots for foraging grounds near by, are favorite haunts of these birds, that return again and again to some preferred spot. Their metallic *cheep, cheep*, warns you to keep away from the little blue-white eggs, hidden away securely in the bushes; and the nervous tail twitchings and jerkings are pathetic to see. Happily for the safety of their nest, the brooding mother has no tell-tale feathers to attract the eye. Dense foliage no more conceals the male bird's brilliant coat than it can the tanager's, or oriole's.

With no attempt at concealment, which he doubtless understands would be quite impossible, he chooses some high, conspicuous perch to which he mounts by easy stages, singing as he goes; and there begins a loud and rapid strain that promises much, but growing weaker and weaker, ends as if the bird were either out of breath or too weak to finish. Then suddenly he begins the same song over again, and keeps up this continuous performance for nearly half an hour. The noonday heat of an August day that silences nearly every other voice, seems to give to the indigo bird's only fresh animation and timbre.

The Rose-breasted Grosbeak

Length—7.75 to 8.5 inches. About one fifth smaller than the robin.

Male—Head and upper parts black. Breast has rose-carmine shield-shaped patch, often extending down-

ward to the centre of the abdomen. Wing linings rose. Underneath, tail quills, and two spots on wings white. Conspicuous, blunt beak.

Female—Brownish, with dark streakings, like a sparrow. Light sulphur yellow under wings.

Range—Eastern North America, from southern Canada to Panama.

Migrations—Early May. September. Summer resident.

Among birds, as among humans, it is the father who lends his name to the family, however difficult it may be to know the mother by it. Who that had not studied the books would recognize Mrs. Scarlet Tanager by her name? Or Mrs. Purple Finch? Or Mrs. Indigo Bunting? Or Mrs. Rose-breasted Grosbeak? The last-named lady has not a rose-colored feather on her, yet she is not a feminist. She is a streaked, brown bird, resembling an overgrown sparrow, with a thick, exaggerated finch bill and a conspicuous, white eyebrow. When her husband wears his winter clothes in the tropics, his feathers are said to be similar to hers, so that even his name, then, does not fit. But when he returns to the United States in May he is, in very truth, a rose-breasted grosbeak, a splendidly handsome fellow. Perhaps before you get a glimpse of the lovely brilliant rose feathers that are his best means of introduction, you may hear a thin *eek* call-note from some tree-top, or better still, listen to the sweet, pure, mellow, joyously warbled song, now loud and clear, now rolling and softly tender, that puts him in the first rank of our songsters.

His special fondness for potato bugs, among other beetle pests, endears him to the farmers; but dependence upon insect diet necessitates migration.

The Cardinal

Length—8 to 9 inches. A little smaller than the robin.
Male—Brilliant or faded cardinal; chin and band around bill black. Beak stout and red. Crest conspicuous. In winter dress, wings washed with gray.
Female—Dove color above, washed with dull red shading to gray below. Tail shorter than male's. Crest, wings, and tail reddish. Breast sometimes tinged with red.
Range—Eastern United States. A Southern bird, becoming more and more common during the summer in states north of Virginia, especially in Ohio, south of which it is resident throughout the year.
Migrations—Resident rather than migrating birds, usually remaining in localities where they have found their way.

Among the numerous names by which this brilliant bird is known it has become immortalized under the title of Mr. James Lane Allen's exquisite book, "The Kentucky Cardinal." Here, while we are given a most charmingly sympathetic, delicate account of the bird "who has only to be seen or heard, and Death adjusts an arrow," it is the cardinal's pathetic fate that impresses one most. Gene Stratton-Porter in "The Song of the Cardinal" has written a charming life study of him—really a bird novel—which is less well known that many of that most popular author's "best sellers."

The bird appears to be a haughty autocrat, a sort of "F. F. V." among the feathered tribes, as, indeed, his title, "Virginia redbird," has been unkindly said to imply. Bearing himself with a refined and courtly dignity, not stooping to soil his feet by walking on the ground like the

more democratic robin, or even condescending below the level of bushes, the cardinal is literally a shining example of self-conscious superiority—a bird to call forth respect and admiration.

Few lady birds sing—an accomplishment usually given to their lovers only, to help woo them. But the female cardinal is a charming singer with a softer voice than her mate's—most becoming to one of her sex—and an individual song quite different from his loud, clear whistle, *Cheer, cheer, cheer! Good cheer; good cheer! Cheer!* like the notes of a fife.

Cardinals never migrate as the rose-breasted grosbeak and so many of our fair-weather feathered friends do. That is because they can live upon the weed seeds and the buds of trees and bushes in winter, as comfortably as upon insects in summer, and forage in the grain fields or in the woods, according to the season. It pays not to be too particular.

The Towhee

Length—8 to 8.5 inches. About one fifth smaller than the robin.

Male—Upper parts black, sometimes margined with rusty. Breast white; chestnut color on sides and rump. Wings marked with white. Three outer feathers of tail striped with white, conspicuous in flight.

Female—Brownish where the male is black. Underneath shading from chestnut to white in the centre.

Range—From Labrador to the Southern states; west to the Rocky Mountains.

Migrations—April. September and October. Summer resident. Rarely a winter resident at the North.

The unobtrusive Towhee, Chewink, Ground Robin, Joree, or Ground Bunting, as this common bird is variously called, is not infrequently mistaken for a robin, because of the reddish chestnut on its under parts. Careful observation, however, shows important distinctions. It is rather smaller and darker in color; its carriage and form are not those of a robin, but of the finch; it hops more energetically and precisely, like a mechanical toy. The female is smaller still, and has an olive tint in her brown back. Her eggs are inconspicuous in color, dirty white speckled with brown, and laid in a sunken nest on the ground. Dead leaves and twigs abound, and form, as the anxious mother fondly hopes, a safe hiding place for her brood. Such careful concealment, however, brings peril, for the most cautious bird-lover may, and sometimes does, inadvertently set his foot on the hidden nest.

Because he was hatched in a ground nest and loves to scratch about on the ground for insects, making the dead leaves and earth rubbish fly like any barn-yard fowl, the towhee is very often called the ground robin. *Che-wink*, or *tow-hee* comes the brisk call from wherever the busy bunting is foraging. The chickadee, whippoorwill, phoebe, pewee and killdeer also tell you their names, but this bird announces himself by two so you need make no mistake.

Rarely does he leave the ground except to sing his love-song. Then, mounting no higher than a bush or low branch, he entrances his sweetheart, if not the human critic, with a song to which Ernest Thompson Seton supplies the well-fitted words: *Chuck-burr, pill-a will-a-will-a.*

The white feathers on the towhee's short, rounded wings and on the sides of his tail are conspicuous signals, as he

flies jerkily to the nearest cover. A bird with such small wings could not be expected to be a graceful flyer.

The Junco

Length—5.5 to 6.5 inches. About the size of the English sparrow.

Male—Upper parts slate-colored; darkest on head and neck, which are sometimes almost black and marked like a cowl. Gray on breast, like a vest. Underneath white. Several outer tail feathers white, conspicuous in flight.

Female—Lighter gray, inclining to brown.

Range—North America. Not common in warm latitudes. Breeds in the Catskills and northern New England.

Migrations—September. April. Winter resident.

When the skies are leaden and the first flurries of snow warn us that winter is near, flocks of juncos, or slate-colored snow birds as they are sometimes called, that reflect the leaden skies on their backs, and the grayish-white snow on their breasts, come from the North to spend the winter. A few enter New England as early as September, but by Thanksgiving increased numbers are foraging for their dinner among the roadside thickets, in the furrows of ploughed fields, on the ground near evergreens, about the barn-yard and even at the dog's plate beyond the kitchen door. They are easily attracted close to the house by waste canary seed and sweepings from the hay loft.

Notice how abruptly the slate-gray color of the junco's mantle ends in a straight line across his light breast, and how, when he flies away, the white feathers on either side

of his tail serve as signals to his friends to follow. Such signals are specially useful when birds are migrating; without them, many stragglers from the flocks might get lost. Juncos, which are extremely sociable birds, except when nesting, need help in keeping together. A crisp, frosty *'tsip* call-note signifies alarm and away flies the flock. They are quiet, unassuming visitors, modest in manner and in dress; but how we should miss them from the winter landscape!

The Snowflake

In the northern United States and Canada, it is the snowflake or snow bunting, a sparrowy little bird with a great deal of white among its rusty brown feathers and an exaggerated white eyebrow that runs around the cheek also, that is the familiar winter visitor. Instead of hopping, like most of its tribe, it walks over the frozen fields and rarely perches higher than a bush or fence rail, for it comes very near being a ground bird. Delighting in icy blasts and snow storms, flocks of these irrepressibly cheerful little foragers fatten on a seed diet picked up where other birds would starve.

The Fox Sparrow

Length—6.5 to 7.25 inches. Nearly an inch longer than the English sparrow.

Male and Female—Upper parts reddish brown, varied with ash-gray, brightest on lower back, wings, and tail. Bluish slate about the head. Underneath whitish; the throat, breast, and sides heavily marked with arrowheads and oblong dashes of reddish brown and blackish.

Range—Alaska and Manitoba to southern United States. Winters chiefly south of Illinois and Virginia. Occasional stragglers remain North most of the winter.

Migrations—March. November. Most common in the migrations.

There will be little difficulty in naming this largest, most plump and reddest of all the sparrows, whose fox-colored feathers, rather than any malicious cunning of its disposition, are responsible for the name it bears. The male bird is incomparably the finest singer among the sparrows. His faint *tseep* call-note gives no indication of his vocal powers that some bleak morning in early March suddenly send a thrill of pleasure through you. It is the most welcome "glad surprise" of all the spring. Without a preliminary twitter, the full, rich, luscious tones, with just a tinge of plaintiveness in them, are poured forth with spontaneous abandon. Such a song at such a time is enough to summon anybody with a musical ear out of doors to where the delicious notes issue from the leafless shrubbery by the roadside. Watch the singer until the song ends, when he will quite likely descend among the dead leaves on the ground and scratch among them like any barn-yard fowl, but somehow contriving to use both feet at once in the operation, as no chicken ever could. He seems to take special delight in damp thickets, where the insects with which he varies his seed diet are plentiful.

The Song Sparrow

Length—6 to 6.5 inches. About the same size as the English sparrow.

Male and Female—Brown head, with three longitudinal gray bands. Brown stripe on sides of throat. Brownish-gray back, streaked with rufous. Underneath gray, shading to white, heavily streaked with darkest brown. A black spot on breast. Wings without bars. Tail plain grayish brown.

Range—North America, from Fur Countries to the Gulf States. Winters from southern Illinois and Massachusetts to the Gulf.

Migrations—March. November. A few birds remain at the North all the year.

Here is a veritable bird neighbor, if ever there was one; at home in our gardens and hedges, not often farther away than the roadside, abundant everywhere during nearly every month in the year, and yet was there ever one too many? There is scarcely an hour in the day, too, when its delicious, ecstatic song may not be heard; in the darkness of midnight, just before dawn, when its voice is almost the first to respond to the chipping sparrow's wiry trill and the robin's warble; in the cool of the morning, the heat of noon, the hush of evening—ever the simple, homely, sweet melody that every good American has learned to love in childhood. What the bird lacks in beauty it abundantly makes up in good cheer. Not at all retiring, though never bold, it chooses some conspicuous perch on a bush or tree to deliver its outburst of song, and sings away with serene unconsciousness. The most familiar song—for this tuneful sparrow has at least six similar but slightly different melodies in his repertoire—begins with a full round note three times repeated, then dashes off into a sweet, short, lively, intricate strain that almost trips itself in its hasty

utterance. Few people whistle well enough to imitate it. Few birds can rival the musical ecstasy.

Artlessly self-confident, not at all bashful, the song sparrow mounts to a conspicuous perch when he sings, rather than let his efforts be muffled by foliage. You will not mistake him for an English sparrow if you notice his distinguishing marks: the fine, dark streaks on his light breast that tend to form a larger blotch in the centre, like a cravat. You see him singing on the extended branch of some low tree, on the topmost twig of a bush, on a fence, or on a piazza railing from which he dives downward into the grass, or flies straight along into the bushes, his tail working like a pump handle as if to help his flight. Very rarely he flies upward.

The Swamp Sparrow

Where sora rails thread their way among the rushes, and red-winged blackbirds, marsh wrens, and Maryland yellow-throats like to live, there listen for the *tweet-tweet-tweet* of the swamp sparrow. It is a sweet but rather monotonous little song that he repeats over and over again to the mate who is busy about her grassy nest in a tussock not far away, but well hidden among the rank swamp growth.

It is not difficult to tell the plain gray-breasted swamp sparrow from the larger song sparrow with the streaked breast.

The Field Sparrow

While the neighborly song sparrow and the swamp sparrow delight to be near water, the field sparrow chooses to live in dry uplands where stunted bushes and cedars cover

the hills and overgrown old fields, and towhees, meadowlarks and brown thrashers keep him company. He is not fond of human society and usually flies away with wavering, uncertain flight from bush to bush rather than submit to a close scrutiny of his bright chestnut-brown back and crown, flesh-colored bill, gray eyebrow, grayish throat, buffy breast and light feet. Because his tail is a trifle longer than the chippy's he is slighty larger than the smallest of our sparrows. Listen for him some evening after sunset when his simple vesper hymn, clear, plaintive, sweet, rings from the bush where he perches especially for the performance. Scarcely any two field sparrows sing precisely alike. Most of them, however, begin with three clear, smooth, leisurely whistles—*cher-wee, cher-wee, cher-wee*—then hurry through the other notes—*cheo, cheo-dee-dee-eee, e, e*—which run rapidly into a trill before they die away. Others reverse the time and diminish the measures toward the close. However sung, the song, which makes the uplands tuneful all day and every day from April to August, does not vary its quality, which is as fine as the vesper sparrow's.

Hatched in a bush, and almost never seen apart from one, this humble little bird might well be called the bush sparrow.

The Chipping Sparrow

Who does not know this humblest, most unassuming, and tamest little neighbor that comes hopping to our very doors wearing a reddish crown, bordered by black, a wide gray eyebrow, and grayish underparts for its distinguishing marks? This mite of a bird with one talent that it so persistently uses all the day and every day

throughout the summer—a high, wiry trill, like the buzz of the locust—may be heard in the dawn before the sky grows even gray, or in the middle of the night; it starts the morning chorus and after all other voices are hushed in the evening, its tremolo is the last bed-song to come from the trees. But however monotonous such cheerfulness sometimes becomes when we are surfeited with real songs from dozens of other throats, there are long periods of midsummer silence that it punctuates most acceptably.

Its call-note, *chip! chip!* from which several of its popular names are derived, is altogether different from the trill which must do duty as a song to express love, contentment, everything that so amiable a little nature might feel impelled to voice.

Both birds carry fine twigs and grasses for the foundation of the nest and, later, long horse hairs which they coil around and around to form a lining. Where do they get so many hairs? A few might have been switched out of the horses' tails in the stable yard or dropped on the road, but what amazingly bright eyes the birds must have to find them, and how curious that chippies alone, of all the feathered tribe, should always insist upon using them to line their cradles.

The Tree Sparrow

When the friendly little chippy leaves us in autumn, this similar but larger cousin comes into the United States from the North, and some people say they cannot tell the two birds apart or the field sparrow from either of them. The tree sparrow, which, unlike the chippy, has no black on his forehead, wears an indistinct black spot on the centre of his breast where the chippy is plain gray, and the field sparrow

is buffy. The tree sparrow has a parti-colored bill, the upper-half black, the lower yellow with a black tip, while the chippy has an entirely black bill, and the field sparrow a flesh-colored one. Only the tree sparrow, which is larger than either of the others, although only as large as a full-grown English sparrow, spends the winter in the northern United States, and by that time his confusing relatives are too far south for comparison. It is in spring and autumn that their ranges over-lap and there is any possibility of confusion.

Professor Beal of the Department of Agriculture, estimates that in a single state—Iowa—the tree sparrows alone destroy eight hundred and seventy-five tons of noxious weed seeds every winter. Then how incalculably great must be our debt to the entire sparrow tribe!

Tree sparrows welcome other winter birds to their friendly flocks that glean a comfortable living from the weed stalks protruding from the snow. Their cheerful, soft, jingling notes have been likened by Mr. Chapman to "sparkling frost crystals turned to music."

The White-throated Sparrow

"What's in a name?" Our English cousins over the border are quite sure they hear this Canada sparrow, as they call it, sing the praises of *Swee-ee-et Cán-a-da, Cán-a-da, Cán-a-da-a,* while the New Englanders think the bird distinctly says, *I-I-Péa-body, Péa-bod-y, Péa-bod-y-I,* extolling the name of one of their first families. You may amuse yourself by fitting whatever words you like to the well-marked metre of the clear, high-pitched, plaintive, sweet song of twelve notes with the accent on the first

syllable of the name. Learn to imitate it and you will be able to whistle up any white-throat within reach of your voice in the Adirondacks, the White Mountains, or the deep, cool woods of Maine, throughout the summer, although the majority of these hardy sparrows nest on the northern side of the Canadian border. Our hot weather they cannot abide. When there is a keen breath of frost in the air, and the hedgerows and thickets in the United States are taking on glorious autumnal tints, listen for the white-throated migrants conversing with sharp *chink* call-notes that sound like the ring of a marble-cutter's chisel.

During the autumn and spring migrations, when these birds are likely to give us the semi-annual pleasure of coming closer about our homes, with other members of their sociable tribe, you will see that the white-throat is a slightly larger and more distinguished bird than the English sparrow, and that he wears a white patch above his plain, gray breast.

The White-crowned Sparrow

The large size and handsome markings of this aristocratic-looking northern sparrow, who wears a black and broad white striped cap on his head, would serve to distinguish him at once, did he not often consort with his equally fine-looking, white-throated cousins while migrating, and so too often get overlooked. Sparrows are such gregarious birds that it is well to scrutinize every flock with especial care in the spring and autumn, when the rarer migrants are passing. This bird is more common in the high altitudes of the Sierra Nevada and Rocky Mountains than elsewhere in the United States. There in the lonely forest it nests in low bushes or on the ground, and

sings its full love-song, as it does in the Northern states and British provinces, along the Atlantic coast; but during the migrations it favors us only with selections from its repertoire. Like the latter half of the white-throat's familiar refrain, repeated a number of times with a peculiar, plaintive cadence and in a clear, soft whistle it begins with a *fe-u-fe-u-feu;* and, again like the white-throat's song, it is frequently heard at night.

The English Sparrow

Is there any one who does not already know this saucy, keen-witted little gamin who thrives where other birds would starve; who insists upon thrusting himself where he is not wanted, not only in other birds' houses, but about the cornices, pillars, and shutters of our own, where his noise and dirt drive good housekeepers frantic; who, without any weapons but his boldness and impudence to fight with, fears neither man nor beast, and who multiplies as fast as the rabbit, so that he is rapidly inheriting the earth? Even children who have never been out of the slums of great cities know at least this one bird, this ever-present nuisance, for he chirps and chatters as cheerfully in the reeking gutters as in the prettiest gardens; he hops with equal calm about the horse's feet and trolley cars in crowded city thoroughfares, as he does about flowery fields and quiet country lanes; he will pick at the overflow from garbage pails on the sidewalk in front of teeming tenements, and manure on the city pavements, with quite as much relish as he will eat the fresh, clean seed spilled by a canary, or cake-crumbs from my lady's hand. Intense cold he endures with cheerful fortitude and as intense mid-

summer heat without losing his astonishing vitality. Eggs have been found in nests in January, for he breeds at all seasons of the year. Is it any wonder that a bird so readily adaptable to all sorts of conditions should thrive like a weed and beat his way around the world?

Now that he has gained such headway in this country his extermination is practically impossible, since a single pair of sparrows might have 275,716,983,698 descendants in ten years! It is foolish to talk of ridding the land of these vermin of birddom. The conditions that kept them in check in Europe are lacking in this great land of freedom and so we Americans must pay the penalty for ignorantly tampering with nature. To trap and poison, snare and shoot them, as we are constantly advised to do, would be to brutalize our human nature like the Prussians'. "Ye are of more value than many sparrows."

Sparrows were first imported into Brooklyn, in 1851, to rid the shade trees of inch worms. This feat they accomplished there and in New York with neatness and despatch. Everyone fed, petted, and coddled them then. It was not until many years later that their true character came to be thoroughly understood.

But they kill no birds, and drive none from the United States or Canada, so we may hope that, in the course of time, our native songsters may pluck up courage to claim their rights and hold their own, as many indeed already do, learning from the sparrows the important lesson of adaptability.

The Vesper Sparrow

To name this dingy sparrow that haunts the open fields and dusty roadsides, you must notice the white feather on each

SPARROW (Male left—Female right)

GOLDFINCH (Summer plumage Female above—Male below)

side of his tail as he spreads it and flies before you to alight upon a fence. Like the song sparrow, this cousin has some fine, dark streaks on his throat and breast but no black cravat. If you get near enough you will notice that his wing coverts, which are a bright chestnut-brown, make the rest of his sparrow plumage look particularly pale and dull. Some people call him the bay-winged bunting; others, the grass finch, because he nests, like the meadow-lark and many other foolish birds, on the ground where mice, snakes, mowing machines, and cats often make sad havoc of his young family.

This sparrow rarely flies higher than a bush to sing his serene, pastoral strain, restful as the twilight, of which, indeed, it seems to be the vocal expression. How different from the ecstatic outburst of the song sparrow! Pensive but not sad, his long-drawn, silvery notes continue in quavers that float off unended like a trail of mist. It is an exquisite evensong.

The Goldfinch

Length—5 to 5.2 inches. About an inch smaller than the English sparrow.

Male—*In summer plumage:* Bright yellow, except on crown of head, frontlet, wings, and tail, which are black. Whitish wing-bands. Tail white on inner webs. *In winter plumage:* Head yellow-olive; no frontlet; back brownish drab; shoulders and throat yellow; brownish white underneath.

Female—Brownish olive above, yellowish white beneath.

Range—North America, from the tropics to the Fur Countries and westward to the Columbia River and California. Common throughout its range.

Migrations—May. October. Common summer resident, frequently seen throughout the winter as well.

Have you a garden gay with marigolds, sunflowers, coreopsis, zinnias, cornflowers, and gaillardias? If so, every goldfinch in your neighborhood knows it and hastens there to feed on the seeds of these plants as fast as they form, so that you need expect to save few for next spring's planting. But most of us prefer the birds when flower seeds cost only five cents a packet; and some of us confess to planting these very flowers especially to entice goldfinches from the fields. Clinging to the slender, swaying stems, they themselves look so like yellow flowers that you do not suspect how many are feasting in the garden until they are startled into flight. Then away they go, bounding along through the air, now rising, now falling, in long aerial waves peculiar to them alone. You can always tell a goldfinch by its wavy course through the air. Often it accents the rise of each wave as it flies by a ripple of sweet, twittering notes. The yellow warbler is sometimes called a wild canary because he looks like a canary; the goldfinch has the same misleading name applied to him because he sings like one.

But goldfinches by no means depend upon our gardens for their daily fare. An old field overgrown with thistles and tall, stalky wild flowers, is the paradise of the goldfinches, summer or winter. Here they congregate in happy companies while the sunshine and goldenrod are as bright as their feathers, and cling to the swaying, slender stems that furnish an abundant harvest, daintily lunching upon the fluffy seeds of thistle blossoms and wild lettuce, pecking at the mullein-stalks, and swinging airily among

the asters and Michaelmas daisies; or, when snow covers the same field with a glistening crust, above which the brown stalks offer only a meagre dinner, the same birds, now sombrely clad in winter feathers, cling to the swaying stems with cheerful fortitude.

In the spring the plumage of the goldfinch, which has been drab and brown through the winter months, is moulted—a change that transforms the bird from a sombre Puritan into the gayest of cavaliers, and seems to wonderfully exalt his spirits. He bursts into a wild, sweet, incoherent melody that might be the outpouring from two or three throats at once instead of one, expressing his rapture somewhat after the manner of the canary, although his song lacks the variety and the finish of his caged namesake. As love-making is prolonged through the entire summer, so is the deliciously sweet, tender song. *Dear, dear, dearie,* you may hear him sing to his dearest all day long.

Usually not until July, when the early thistles furnish plenty of fluff for nest lining, do pairs of goldfinches withdraw from flocks to begin the serious business of raising a family. A compact, cozy, cup-like structure of fine grass, vegetable fibre, and moss, is placed in the crotch of a bush or tree, or sometimes in a tall, branching thistle plant. Except the cedar waxwings, the goldfinches are the latest nesters of all our birds.

The Purple Finch

Length—6 to 6.25 inches. About the size of the English sparrow.

Male—Until two years old: Sparrow-like in appearance like

the female, but with olive-yellow on chin and lower back. *Afterward:* entire body suffused with a raspberry-red, deepest on head, lower back, and breast; other parts only faintly washed with this color. More brown on back; wings and tail, which are dusky, have some reddish-brown feathers. Underneath grayish white. Bill heavy. Tail forked.

Female—Grayish brown above; whitish below; finely streaked everywhere with very dark brown, like a sparrow. Sides of breast have arrow-shaped marks. Wings and tail darkest.

Range—North America, from Columbia River eastward to Atlantic, and from Mexico northward to Manitoba. Most common in Middle states and New England. Winters south of Pennsylvania.

Migrations—March. November. Common summer resident. Rarely individuals winter at the North.

In this "much be-sparrowed country" of ours, familiarity is apt to breed contempt for any bird that looks sparrowy, in which case one of the most delicious songsters we have might easily be overlooked. It is not until the purple finch reaches maturity that his plumage takes on the raspberry-red tints that some ornithologists named purple. It would seem as if the people who named most of our birds and wild flowers must have been color-blind. Old rose is more nearly the color of this finch which looks like a brown sparrow that had been dipped in a bath of raspberry juice and left out in the sun to fade. But only the mature males wear this color, which is deepest on their head, rump, and breast. Their sons are decidedly sparrowy until the second year and their wives look so much like the

song sparrows that one must notice their heavy, rounded bills and forked tails to make sure they are not their cousins.

Like the goldfinches, these finches, or linnets as they are sometimes called, wander about in flocks. You see them in the hemlock and spruce trees feeding on the buds at the tips of the branches, in the orchard pecking at the blossoms on the fruit trees, in the wheat fields with the goldfinches destroying the larvæ of the midge, or by the roadsides cracking the seeds of weeds that are too hard to open for birds less stout of bill. When it is time to nest they prefer evergreen trees to all others, although orchards sometimes attract them.

A sudden outbreak of spirited, warbled song in March opens the purple finch's musical season, which is almost as long as the song sparrow's. Subdued nearly to a humming in October, it is still a delightful reminder of the finest voice possessed by any bird in the great sparrow tribe. But it is when the singer is in love that the song reaches its highest ecstasy. Then he springs into the air just as the yellow-breasted chat, the oven-bird, and woodcock do when they go a-wooing, and sings excitedly while mounting fifteen or twenty feet above his mate until he drops exhausted at her side.

CHAPTER X

THE ILL-ASSORTED BLACKBIRD FAMILY

Bronzed and Purple Grackles or Crow Blackbirds — Rusty Blackbird — Baltimore Oriole — Orchard Oriole — Meadowlark — Red-winged Blackbird — Cowbird — Bobolink

Was ever a family so ill-assorted as the blackbird and oriole clan? What traits are common to every member of it? Not one, apparently. Some of the family are gorgeously clad, like the Baltimore oriole; some quite plainly, like the cowbird; and although black seems to be a prevalent color in the plumage, the meadowlark, for example, is a brown bird with only a black crescent on its breast. Most of the males are dressed quite differently from their mates, although the female grackles are merely duller. Some of these birds sing exquisitely; others wheeze or croak a few unmusical notes. Some live in huge flocks; some live in couples. Some, like the bobolinks, travel to the tropics and beyond every winter; others, like the meadowlark, can endure the intense cold of the North. Part of the family feed upon the ground, but the oriole branch lives in the trees. Devotion to mates and children characterizes most of the family; but we cannot overlook the cowbird that neither mates nor takes the slightest care of its offspring. The cowbird builds no nest, while its

cousin, the Baltimore oriole, is a famous weaver. The bobolink is a rollicking, jolly fellow; the grackle is solemn, even morose. What a queer family!

The Purple Grackle and Bronzed Grackle, or Crow Blackbirds

Length—12 to 13 inches. About one fourth as large again as the robin.

Male Purple Grackle—Iridescent black in which metallic blue, green, violet, and copper tints predominate. Iridescent bars on plumage. Eye bright yellow and conspicuous. Tail longer than wings.

Male Bronzed Grackle—Similar, but with brassy upper parts.

Females—Less brilliant than males.

Range—Purple Grackle: eastern United States from the Gulf to Massachusetts. *Bronzed Grackle:* North America east of the Rockies, breeding from the Gulf to Hudson Bay and Labrador. Winters in southern parts of United States.

Probably every American knows either one or other of our two common crow blackbirds.

When the trees are still leafless in earliest spring and the ground is brown and cold, flocks of blackbirds dot the bare trees or take shelter from March winds among their favorite evergreens, or walk solemnly about on the earth like small crows, feeding on fat, white grubs and beetles in a business-like way. They are singularly joyless birds. A croaking, wheezy whistle, like the sound of a cart wheel that needs axle-grease, expresses whatever pleasure they

may have in life. The grackle's mate alone appreciates his efforts as, standing on tip-toe, with half-spread tail, he pours forth his soul through a rusty-hinged larynx. When a number of grackles lift up their voices at once, someone has aptly likened the result to a "good wheelbarrow chorus."

Always sociable, living in flocks the entire year through, it is in autumn only that they band together in enormous numbers, and in the West especially, make havoc in the cornfields. However, they do incalculable good as insect destroyers; grasshoppers are devoured wholesale when they settle in a field, so the farmers must forgive the "maize thieves."

The Rusty Blackbird

Length—9 to 9.55 inches. A trifle smaller than the robin.

Male—In full plumage, glossy black with metallic reflections, intermixed with rusty brown that becomes more pronounced as the season advances. Pale, straw colored eyes.

Female—Duller plumage and more rusty, inclining to gray. Light line over eye. Smaller than male.

Range—North America, from Newfoundland to Gulf of Mexico and westward to the Plains.

Migrations—April. November.

A smaller, more sociable bird than the grackle, though it travels in smaller flocks, the rusty blackbird condescends to mingle freely with other feathered friends in marshes and by brooksides. You can identify it by its rusty feathers and pale yellow eye, and easily distinguish the rusty-gray

female from the female redwing that is conspicuously streaked, but about the same size.

In April, flocks of these birds may frequently be seen along sluggish, secluded streams in the woods, feeding upon the seeds of various water or brookside plants, and probably upon insects also. At such times they often indulge in a curious spluttering, squeaking, musical concert that one listens to with pleasure. The breeding range is mostly north of the United States.

The Baltimore Oriole

Length—7 to 8 inches. About one fifth smaller than the robin.

Male—Head throat, upper part of back glossy black. Wings black, with white spots and edgings. Tail-quills black, with yellow markings on the tips. Everywhere else orange, shading into flame.

Female—Yellowish olive. Wings dark brown, and quills margined with white. Tail yellowish brown, with obscure, dusky bars.

Range—The whole United States. Most numerous in Eastern states below 55° north latitude.

Migrations—Early May. Middle of September. Common summer resident.

A flash of fire through the air—a rich, high, whistled song floating in the wake of the feathered meteor—the Baltimore oriole cannot be mistaken. When the orchards are in blossom he arrives in full plumage and song, and awaits the coming of the female birds, that travel northward more leisurely in flocks. He is decidedly in evidence. No foliage is dense enough to hide his brilliancy; and his insistent

song with its martial, interrogative notes, becomes almost tiresome until he is happily mated and family cares check his enthusiasm. One can easily imitate his whistle and, on calling him, find a quick response from the mystified oriole who is always disposed to live within hailing distance of human homes. The music from a piano excites him as, joyously singing, he flies nearer and nearer to the house.

Among the best architects in the world is his plain but energetic mate. Gracefully swung from the end of a high branch of some tall tree, preferably an elm or a willow, the nest is woven with exquisite skill into a long, flexible pouch that rain cannot penetrate nor wind shake from its horsehair moorings. Bits of string, threads of silk, and sometimes yarn of the gayest colors, if laid about the shrubbery in the garden, will be quickly interwoven with shreds of bark and milk-weed stalks that the bird has found afield. The shape of the nest often differs, because in unsettled regions, where hawks abound, it is necessary to make it deeper than seven inches (the customary depth when it is built near the homes of men), and to partly close it at the top to conceal the sitting bird.

The Orchard Oriole

Length—7 to 7.3 inches. About one fourth smaller than the robin.

Male—Head, throat, upper back, tail, and part of wings black. Breast, rump, shoulders, under wing and tail coverts, and under parts bright reddish brown after second year. Whitish-yellow markings on a few tail and wing feathers.

Female—Head and upper parts olive, shading into brown;

brighter on head and near tail. Back and wings dusky brown, with pale buff shoulder-bars and edges of coverts. Throat black. Under parts olive, shading into yellow.
Range—Canada to Central America. Common in temperate latitudes of the United States, east of the Plains.
Migrations—Early May. Middle of September. Common summer resident.

With a more southerly range than the Baltimore oriole and less conspicuous coloring, the orchard oriole is not so familiar a bird in many Northern states, where, nevertheless, it is quite common enough to be classed among our would-be intimates. The orchard is not always so close to the house as this bird cares to venture; he will pursue an insect even to the piazza vines. One which used to come close to the house to feed on basket worms dangling from a tamarisk bush, returned long after the last worm was eaten whenever someone touched the piano keys. Orioles have a quick ear for music.

This oriole's song, says John Burroughs, is like scarlet, "strong, intense, emphatic," but it is sweet and is more rapidly uttered than that of others of the family. It ends for the season early in July.

A beautiful nest—not often pendent like the Baltimore's, but securely placed in the fork of a sturdy fruit tree, at a moderate height, and woven with skill and precision, like a basket—is built by the orchard oriole. When the dried grasses from one of these nests were stretched and measured, all were found to be very nearly the same length, showing to what pains the little weaver had gone to make the nest neat and pliable, yet strong. Four cloudy, white

eggs with dark-brown spots are usually found in the nest in June.

The Meadowlark

Length—10 to 11 inches. A trifle larger than the robin.

Male—Upper parts brown, varied with chestnut, deep brown, and black. Crown streaked with brown and black, and with a cream-colored streak through the centre. Dark brown line apparently running through the eye; another line over the eye, yellow. Throat and chin yellow; a large, conspicuous, black crescent on breast. Underneath yellow, shading into buffy brown, spotted or streaked with very dark brown. Outer tail feathers chiefly white, conspicuous in flight. Long, strong legs and claws, adapted for walking. Less black in winter plumage, which is more grayish brown.

Female—Paler than male.

Range—North America, from Newfoundland to the Gulf of Mexico, and westward to the Plains, where the Western meadowlark takes its place. Winters from Massachusetts and Illinois southward.

Migrations—April. Late October. Usually a resident, a few remaining throughout the winter.

Every farmer's boy knows his father's friend, the meadowlark, which keeps well hidden in the grass and stubble of dry fields of grass or grain where the protective mimicry of its plumage effectually conceals it. When the shy bird takes wing, note the white feathers on the sides of its tail to be sure it is not the big, brownish flicker, which wears a patch of white feathers on its lower back, conspicuous as it

flies. The meadowlark has the impolite habit of turning its back upon one to conceal its conspicuous yellow breast from human eyes. It flaps and sails through the air much like a bob-white. But flying is not its specialty. It is a strong-legged, active walker, and rarely rises from the ground unless an intruder gets very near, when away it flies, with a nasal, sputtered alarm note, to alight upon a fence rail or other low perch.

The tender, sweet, plaintive, flute-like whistle, *Spring-o'-the-year*, is a deliberate song usually given from some favorite platform—a stump, a rock, a fence or a mound—to which the bird goes for his musical performance only. He sings on and on delightfully, not always the same song, for he has several in his repertoire, and charms all listeners.

The one most interested keeps well concealed among the grasses where her grassy nest is almost impossible to find, especially if it be partly arched over at the top. No farmer who realizes what an enormous number of grasshoppers, not to mention other destructive insects, meadowlarks destroy, is foolish enough to let his mowing-machine pass over their nests if he can but locate them. By the time hay is ready for cutting in June, little meadowlarks are usually running about through grassy run-ways, but eggs of the second brood too frequently, alas! meet a tragic end, and eggs of either brood may have had large toll taken by meadow-mice and snakes—the greatest foes of all birds that nest on the ground.

The Red-winged Blackbird

Length—Usually about an inch smaller than the robin.
Male—Coal-black. Shoulders scarlet, edged with yellow.

Female—Feathers finely and inconspicuously speckled with brown, rusty black, and yellowish white.

Range—North America. Throughout the United States to Columbia River.

Migrations—March. October. Common summer resident.

When looking for the first pussy willows in the frozen marshes, or listening to the peeping of young frogs some day in early spring, you will, no doubt, become acquainted with this handsome blackbird, with red and orange epaulettes on his shoulders, who has just returned from the South. *Ke, kong-ker-ee,* he flutes from the willows and alders about the reedy meadows where he and his bachelor friends flock together and make them ring "with social cheer and jubilee." A little later, flocks of dingy, brown, streaked birds, traveling northward, pause to rest in the marshes. Wholesale courting takes place shortly after and every red-wing in a black uniform chooses one of the plain, streaked, matter-of-fact birds for his mate just as if they were the chorus in one of Gilbert and Sullivan's operas. The remainder continue their unmaidenly journey in search of husbands, whom they find waiting in cheerful readiness in almost any marsh. By the first of May all have settled down to home life.

Then how constant are the rich, liquid, sweet *o-ka-lee* notes of the red-wing! Ever in foolish fear for the safety of his nest, he advertises its whereabouts in musical headlines from the top of the nearest tree, or circles around it on fluttering wings above the sedges, or *chucks* at any trespasser near it until one might easily torture him by going straight to its site.

These tuneful blackbirds congregate in large numbers where the wild rice is ripening and make short excursions to the farmers' fields, where they destroy some grain, it is true, but so little as compared with the quantity of injurious insects and weed seed, that the debt is largely in the red-wings' favor.

The Cowbird

Length—7 to 8 inches. About one fifth smaller than the robin.

Male—Iridescent black, with head, neck, and breast glistening, coffee-brown.

Female—Dull, grayish brown above, a shade lighter below, and streaked with paler shades of brown.

Range—United States, from coast to coast. North into British America, south into Mexico.

Migrations—March. November. Common summer resident.

This contemptible bird everyone should know if for no better reason than to despise it. You will see it alone, or in small flocks, walking about the pastures behind cattle; or, in the western cattle country, boldly perching upon their backs to feed upon the insect parasites—a pleasant visitor for the cows. So far, so good.

But the male cowbird's morals are awful, for he makes violent love to any brownish-gray cowbird he fancies, but mates with none. What should be his song is a squeaking *kluck tse-e-e*, squeezed out with difficulty, or a gurgle, like water being poured from a bottle. When he goes a-wooing, he behaves ridiculously, parading with spread wings and tail and acting as if he were violently nauseated in the

presence of the lady. Fancy a cousin of the musical bobolink behaving so!

And nothing good can be said for the female cowbird. Shirking as she does every motherly duty, she sneaks about the woods and thickets, slyly watching her chance to lay an egg in the cradle of some other bird, since she never makes a nest of her own. Thus she scatters her prospective family throughout the neighborhood. The yellow warbler, which is a famous sufferer from her visits, sometimes outwits her, as we have seen; but other warblers, less clever, the vireos, some sparrows, and, more rarely, woodpeckers, flycatchers, orioles, thrushes and wrens, seem to accept the unwelcome gift without a protest. At least they might peck holes in it if unable to roll it out of the nest. Probably every cowbird you see has sacrificed the lives of at least part of a brood of valuable, insectivorous songsters. Without the least spark of gratitude in its cold heart, a young cowbird grafter forsakes its over-kind foster parents as soon as it can pick up its living and remains thenceforth among its own kin—of whom only cows could think well.

The Bobolink

Length—7 inches. A trifle larger than the English sparrow.
Male—In spring plumage: Black, with light yellow patch on upper neck, also on edges of wings and tail feathers. Rump and upper wings splashed with white. Middle of back streaked with pale buff. Tail feathers have pointed tips. *In autumn plumage:* resembles female.
Female—Dull yellow-brown, with light and dark dashes on back, wings, and tail. Two decided dark stripes on top of head.

ORIOLE (Summer plumage Male left—Female right)

MEADOW—LARK

Range—North America, from Eastern coast to Western prairies. Migrates in early autumn to Southern states, and in winter to South America and West Indies.

Migrations—Early May. From July to October. Common summer resident.

On a May morning, when buttercups spangle the fresh grasses in the meadows, this rollicking jolly fellow rises from their midst into the air with the merriest frolic of a song you ever head. Loud, clear, strong, full of queer kinks and twists that could not possibly be written down in our musical scale, the rippling, reckless music seems to keep his wings in motion as well as his throat; for when it suddenly bursts forth, up he shoots into the air like a skylark, and paddles himself along with just the tips of his wings while it is the "mad music" that seemingly propels him—then he drops with his song into the grass again. Frequently he pours out his hilarious melody while swaying on the slender stems of the grasses, propped by the stiff, pointed feathers of his tail. A score or more of bobolinks rising in some open meadow all day long, are worth traveling miles to hear.

If you were to see the mate of one of these merry minstrels apart from him, she might be easily mistaken for another of those tiresome sparrows. A brown, streaked bird, with some buff and a few white feathers, she shades into the colors of the ground as well as they and covers her loose heap of twigs, leaves and grasses in the hayfield so harmoniously that few people ever find it or the clever sitter.

As early as the Fourth of July, bobolinks begin to desert the choir, being the first birds to leave us. Traveling

southward by easy stages, they feed on the wild rice in the marshes until, late in August, enormous flocks reach the cultivated rice fields of South Carolina and Georgia.

On the way, a great transformation has gradually taken place in the male bobolink's dress. At the North he wore a black, buff, and white wedding garment, with the unique distinction of being lighter above than below; but this he has exchanged for a sparrowy winter suit like his mate's and children's, only with a little more buff about it.

In this inconspicuous dress the reedbirds—or ricebirds, as bobolinks are usually called south of Mason and Dixon's line—descend in hordes upon the rice plantations when the grain is in the milk, and do several millions of dollars' worth of damage to the crop every year, sad, sad to tell. Of course, the birds are snared, shot, poisoned. In Southern markets a dozen of them on a skewer may be bought, plucked and ready for the oven, for half a dollar. What a tragic fate to overtake our joyous songsters! Birds that have the misfortune to like anything planted by man, pay a terribly heavy penalty.

Such bobolinks as escape death, leave this country by way of Florida and continue their four-thousand-mile journey to southern Brazil, where they spend the winter; yet, nothing daunted by the tragedies in the rice fields, they dare return to us by the same route in May. By this time the males have made another complete change of feather to go a-courting. Most birds are content to moult once a year, just after nursery duties have ended; some, it is true, put on a partially new suit in the following spring, retaining only their old wing and tail feathers; but a very few, the bobolink, goldfinch, and scarlet tanager among them, undergo as complete a change as Harlequin.

CHAPTER XI

TWO RASCALLY RELATIVES

Crow—Blue Jay

The Crow

Length—16 to 17.5 inches.
Male—Glossy black with violet reflections. Wings appear saw-toothed when spread, and almost equal the tail in length.
Female—Like male, except that the black is less brilliant.
Range—Throughout North America, from Hudson Bay to the Gulf of Mexico.
Migrations—Permanent resident.

If we have an eye for the picturesque, we place a certain value upon the broad, strong dash of color in the landscape, given by a flock of crows flapping their course above a cornfield, against an October sky; but the practical eye of the farmer looks only for his gun in such a case. To him the crow is an unmitigated nuisance, all the more maddening because it is clever enough to circumvent every means devised for its ruin. Nothing escapes its rapacity; fear is unknown to it. It commits petty larceny and even murder in broad daylight, chooses the most conspicuous

perches, and yet its assurance is amply justified in its steadily increasing numbers. With a *caw, caw, caw,* for friend and foe alike, perhaps it knows its own true worth better than the average farmer, who has persecuted it with bounty laws, shot-gun, and poison for generations, keeping no account of the immense numbers of cutworms, grubs and larvæ of many pests it picks up as it walks after the plough every spring. The farmer counts the corn stolen, however, and puts a price on the robber's head. Yet he knows that corn, dipped in tar before it is put in the ground, will be left alone to sprout. But who is clever enough to keep the crows out of the field in autumn? If the ox that treadeth out the corn is entitled to his share of it, ought not the crows who saved it from grasshoppers, cutworms, May beetles and other pests, be sharers in the profits? Granted (very reluctantly by some); but what about eating the farmer's young chickens and turkeys as well as the eggs and young of little song birds? At times, it must be admitted, the crow's heart is certainly as black as his feathers; he is as black as he is painted, but happily such cannibalism is apt to be rare. Strange that a bird so tenderly devoted to his own fledglings, should be so heartless to others'!

Toward the end of winter, you may see a pair of crows carrying sticks and trash to the top of some tall tree in the leafless woods, and there, in this bulky cradle, resembling a squirrel's nest, they raise their family. Young crows may be easily tamed and they make interesting, but very mischievous pets. It is only when crows are nesting that they give up their social, flocking habit and the settling of their affairs in noisy public debates.

In winter, if the fields be lean, large picturesque flocks

BOBOLINK (Summer plumage Male above—Female below)

CROW

may be seen at dawn streaking across the sky to distant beaches where they feed on worms, refuse, and small shellfish. More than one crow has been watched, rising in the air with a clam or a mussel in his claws, dropping it on a rock, then falling after it, as soon as the shell is smashed, to feast upon its contents.

With punctual regularity at sundown, the flocks straggle back inland to go to sleep, sometimes thousands of crows together in a single roost. Many birds have more regular meal hours and bed-time than some children seem to care for. Because crows eat almost anything they can find, and pick up a good living where other birds, more finical or less clever, would starve, they rarely need to migrate; but they are great rovers.

The Blue Jay

Length—11 to 12 inches. Larger than the robin.
Male and Female—Blue above. Black band around the neck, joining some black feathers on the back. Under parts dusky white. Wing coverts and tail bright blue, barred with black. Tail much rounded. Many feathers edged and tipped with white. Head finely crested.
Range—Eastern coast of North America to the Plains, and from northern Canada to Florida and eastern Texas.
Migrations—Permanent resident. Although seen in flocks moving southward or northward, they are merely seeking happier hunting grounds, not migrating.

This vivacious, dashing fellow, harsh-voiced and noisy, cannot be overlooked; for when a bright, grayish-blue bird, about a foot long, roves about the neighborhood with a troop of screaming relatives, everybody knows it. In

summer he may keep quiet, but he throws off all restraint in autumn. Hear him hammering at an acorn some frosty morning! How vigorous his motions, how alert and independent! His beautiful military blue, black, and white feathers, and crested head, give him distinction.

He is certainly handsome. But is his beauty only skin deep? Does it cover, in reality, a multitude of sins? Shocking stories of murder in the song bird's nest have branded the blue jay with quite as bad a name as the crow's. The brains of fledglings, it has been said, are his favorite tid-bits. But, happily, scientists who have turned the searchlight on his deeds find that his sins have been greatly exaggerated. Remains of young birds were found in only two out of nearly three hundred blue jays' stomachs analyzed. Birds' eggs are more apt to be sucked by both jays and squirrels than are the nestlings to be eaten. Let him who has never enjoyed an egg for breakfast throw the first stone at this sinner. Fruit, grain, thin-shelled nuts, and the larger seeds of trees and shrubs—gathered for the most part in Nature's open store-room, not in man's—are what the jay chiefly delights in; and these he hides away, squirrel-fashion, to provide for the rainy day. By burying acorns and the small nuts, he plants innumerable trees. More than half of all his food in summer consists of insects; then he is quite as useful as his cousin, the crow.

Jays are fearful teasers. How they love to chase about some poor, blinking, bewildered owl, in the daylight! *Jay-jay-jay*, you may hear them scream through the woods. They mimic the hawk's cry for no better reason, perhaps, than that they may laugh at the panic into which timid little birds are thrown at the terrifying sound.

Mischievous as a monkey, deft at hiding as a squirrel, a pet jay will carry all its beech nuts to a piazza roof, wedge them between the shingles, and open them there with ease. An interesting array of hair pins, matches, buttons, a thimble, and a silver spoon were raked out of one such favorite cache under the eaves.

CHAPTER XII

THE FLYCATCHERS

Kingbird—Crested Flycatcher—Phoebe—Wood Pewee—Least Flycatcher

A dusky bird, smaller than the robin, lighter gray underneath than on its sooty-brown back, with a well-rounded, erect head, set on a short, thick neck, one may safely guess is one of the flycatchers—another strictly American family. If the bird has a white band across the end of its tail it is probably the fearless kingbird. If the feathers on top of its head look as if they had been brushed the wrong way into a pointed crest; moreover, if some chestnut color shows in its tail when spread, and its pearly gray breast shades into yellow underneath, you are looking at the noisy "wild Irishman" of birddom, the crested flycatcher. Confiding Phoebe wears the plainest of dull clothes with a still darker, dusky crown cap, and a line of white on her outer tail feathers. She and the plaintive wood pewee, who has two indistinct whitish bars across her extra-long wings, are scarcely larger than an English sparrow; while the least flycatcher, who calls himself *Chebec*, is, as you may suppose, the smallest member of the tribe to leave the tropics and spend the summer with us. Male and female members of this family wear similar clothes, fortunately for the novice who tries to name them.

A flycatcher may be known at sight by the way he collects his dinner. Perhaps he will be sitting quietly on the limb of a tree or on a fence as if dreaming, when suddenly off he dashes into the air, clicks his broad bill sharply over a winged insect, flutters an instant, then wheels about and returns to his favorite perch to wait for the next course to fly by. He may describe fifty such loops in mid-air and make as many fatal snap-shots before his hunger is satisfied. A swallow or a swift would keep constantly on the wing; a vireo would hunt leisurely among the foliage; a warbler would restlessly flit about the tree hunting for its dinner among the leaves; but the dignified, dexterous flycatcher, like a hawk, waits patiently on his lookout for a dinner to fly toward him. "All things come to him who waits," he firmly believes.

None of the family is musically gifted, but all make a more or less pleasing noise. Flycatchers are solitary, sedentary birds, never being found in flocks; but when mated, they are devoted home lovers.

We are apt to think of tropical birds as very gaily feathered, but certainly many that come from warmer climes to spend the summer are less conspicuous than Quakers.

The Kingbird

Length—8 inches. About two inches shorter than the robin.

Male and Female—Ashy black above; white, shaded with ash-color, beneath. A concealed crest of orange-red on crown lacking in female. Tail black, terminating with a white band conspicuous in flight. Wing feathers edged with white.

Range—United States to the Rocky Mountains. British provinces to Central and South America.
Migrations—May. September. Common summer resident.

In spite of his scientific name, which has branded him the tyrant of tyrants, the kingbird is by no means a bully. See him high in air in hot pursuit of that big, black villainous crow, who dared try to rob his nest, darting about the rascal's head and pecking at his eyes until he is glad to leave the neighborhood! There seems to be an eternal feud between them. Even the marauding hawk, that strikes terror to every other feathered breast, will be driven off by the plucky little kingbird. But surely a courageous home defender is no tyrant. A kingbird doesn't like the scolding catbird for a neighbor, or the teasing blue jay, or the meddlesome English sparrow, but he simply gives them a wide berth. He is no Don Quixote ready to fight from mere bravado. *Tyrannus tyrannus* is a libel.

For years he has been called the bee martin and some scientific men in Washington determined to learn if that name, also, is deserved. So they collected more than two hundred kingbirds from different parts of the country, examined their stomachs and found bees—mostly drones—in only fourteen. The bird is too keen sighted and clever to snap up knowingly a bee with a sting attached when, probably, he is more sorry for it than the bee-keeper.

He destroys so many robber flies—a pest of the hives—that the intelligent apiarist, who keeps bees in his orchard to fertilize the blossoms, always likes to see a pair of king-

birds nesting in one of his fruit trees. The gardener welcomes the bird that eats rose chafers; the farmer approves of him because he catches the gadfly that torments his horses and cattle, as well as the grasshoppers, katydids, and crickets that would destroy his field crops if left unchecked. The kingbird is readily identified by the white band across the end of his tail.

From a favorite lookout on a fence-rail he will detect an insect more than one hundred and seventy feet away, where no human eye could see it, dash off, snap it safely within his bill, flutter uncertainly an instant, then return to his perch ready to "loop the loop" again any moment. The curved clasp at the tip of his bill and the stiff hairs at the base help hold every insect prisoner. While waiting for food to fly into sight the watcher does a good deal of noisy calling. His harsh, clattering note, *ching, ching*, which penetrates to a surprising distance, does not express alarm, but rather the exultant joy of victory. Before and during the nesting season the rasping clatter is kept up all day long.

The Crested Flycatcher

Length—8.5 to 9 inches. A little smaller than the robin.

Male and Female—Feathers of the head pointed and erect. Upper parts dark grayish olive, inclining to brown on wings and tail. Wing coverts crossed with two irregular bars of yellowish white. Throat gray, shading into pale sulphur-yellow underneath, that also extends under the wings. Inner vane of several tail quills rusty red. Bristles at base of bill.

Range—From Mexico, Central America, and West Indies northward to southern Canada and westward to the

Plains. Most common in Mississippi basin; common also in eastern United States, south of New England.

Migrations—May. September. Common summer resident.

Far more tyrannical than the kingbird is this "wild Irishman," as John Burroughs calls the flycatcher with the tousled head and harsh, rasping voice, who prowls around the woods and orchards startling most feathered friends and foes with a loud, piercing exclamation that sounds like *What!* Unlike good children, he is more often heard than seen.

That the unpopular bird takes a mischievous delight in scaring its enemies may be known from its liking better than any other lining for its nest, a cast snake skin. Is it any wonder that the baby flycatchers' hair stands on end? If the great-crest cannot find the skin of a snake to coil around her nest, or to hang outside of it, she may use onion skins, or oiled paper, or even fish scales; for what was once a protective custom sometimes becomes degraded into a cheap imitation of the imitation in the furnishing of her house. Into an abandoned woodpeckers' hole or a bluebirds' cavity after the young of these early nesters have flown, or into some unappropriated hollow in a tree, this flycatcher carries enough grasses, weeds, and feathers to keep her nestlings cozy during those rare days of June beloved by Lowell, but which Dr. Holmes observed are often so rare they are raw.

The Phoebe

Length—7 inches. About an inch longer than the English sparrow.

BLUE JAY

L.E. Todhunter

Male and Female—Dusky olive-brown above; darkest on head. Wings and tail dusky, the outer edges of some tail feathers whitish. Dingy yellowish white underneath.

Range—North America, from Newfoundland to the South Atlantic states and westward to the Rockies. Winters south of the Carolinas, and into Mexico, Central America, and the West Indies.

Migrations—March. October. Common summer resident.

The first of its family to come north, as well as the last to go, the phoebe appears toward the end of March to snap up the first insects warmed into life by the spring sunshine. Grackles in the evergreens, red-wings in the swampy meadows, bluebirds in the orchard may assure us that summer is on the way; but the homely, confiding phoebe, who comes close about our houses and barns, brings the good news home to us every hour.

This is still another bird to introduce himself by name. *Pewit—phoebe, pewit—phoebe*, he calls continually. As he perches on the peak of a building or other point of vantage, notice how vigorously he wags his tail when he calls, and turns his head this way and that, to keep an eye in all directions lest a bite should fly by him unawares.

Presently a mate comes from somewhere south of the Carolinas where she has passed the winter; for phoebes are more hardy than the rest of the family and all do not travel so far as the tropics. With unfailing accuracy she finds the region where she built her nest the previous season or where she herself was hatched. This instinct of re-

turned direction is marvellous, is it not? Birds almost never get lost.

Phoebes like a covering over their heads to protect their nests from spring rains, so you will see a domesticated couple going about the place investigating niches under the piazza roof, beams in an empty barn or shed, and projections under bridges and trestles—express trains may thunder overhead so that the site be covered. By the middle of April a neat nest of moss and lichen, plastered together with mud and lined with long hair or wool, if sheep are near, is made in the vicinity of their home of the year before. The nursery is exquisitely fashioned.

From purely selfish motives it pays to cultivate neighbors ever on the lookout for flies, wasps, May-beetles, click beetles, elm destroyers, the moth of the cutworm, and countless other winged pests. The first nest is usually so infested by lice that the phoebes either tear it down in July, and build a new one on its site, or else make the second nest at a little distance from the first. The parents of two broods of from four to six ravenously hungry, insectivorous young, with an instinctive desire to return to their old home year after year, should surely meet no discouragement.

The Wood Pewee

Length—6.5 inches. A trifle larger than the English sparrow.

Male and Female—Dusky brownish olive above, darkest on head; lighter underneath, and with a yellowish tinge on the gray under parts. Dusky wings and tail, the wing coverts tipped with soiled white, forming two indistinct bars. Wings longer than tail.

Doubtless this demure, gentle little cousin of the noisy, aggressive, crested flycatcher has no secret sorrow preying at its heart, but the tender pathos of the long-drawn notes *Pee-e-wee, Pee-e-wee* would seem to indicate that it is rather melancholy. And it sings out its name (in spite of the books which teach us that the flycatchers are "songless, perching birds") from the time of its arrival from Central America in May until only the tireless indigo bunting and the red-eyed vireo are left in the choir in August.

But how suddenly its melancholy langour departs the instant an insect flies within sight! With a cheerful, sudden sally in mid-air, it snaps up the luscious bite, for it can be quite as active as any of the family. While not so ready to be neighborly as the phoebe, the wood pewee condescends to visit our orchards and shade trees.

When nesting time comes, it looks for a partly decayed, lichen-covered branch, and onto this saddles a compact, exquisite cradle of fine grass, moss, and shreds of bark, binding bits of lichen with spiders' web to the outside until the sharpest of eyes are needed to tell the stuccoed nest from the limb it rests on. Only the tiny humming-bird, who also uses lichen as a protective and decorative device, conceals her nest so successfully.

The Least Flycatcher

It is not until he calls out his name, *Chebec! Chebec!* in clear and business-like tones from some tree-top that you could identify this fluffy flycatcher, scarcely more than five inches long, whose dusky coat and light vest offer no helpful markings. Not a single gay feather relieves his sombre suit—a queer, Quakerly taste for a bird that spends

half his life in the tropics among gorgeously feathered friends. Even the plain vireos wear finer clothes than the dusky flycatchers. You may know that the chebec is not one of those deliberate searchers of foliage by his sudden, murderous sallies in mid-air.

Abundant from Pennsylvania to Quebec, the least flycatchers are too inconspicuous to be much noticed. They haunt apple orchards chiefly at nesting time, fortunately for the crop.

CHAPTER XIII

SOME QUEER RELATIONS

WHIPPOORWILL—NIGHT-HAWK—CHIMNEY SWIFT—RUBY-THROATED HUMMING-BIRD

The Whippoorwill

Length—9 to 10 inches. About the size of the robin. Apparently much larger, because of its wide wing-spread.

Male—A long-winged bird, mottled all over with reddish brown, grayish black, and dusky white; numerous bristles fringing the large mouth. A narrow white band across the upper breast. Ends of outer tail-quills white.

Female—Similar to male, except that the tail is dusky in color where that of the male is white. Band on breast buff instead of white.

Range—United States to the Plains. Not common near the sea.

Migrations—Late April to middle of September. Summer resident.

A queer, shadowy bird, that sleeps all day in the woods and flies about through open country after dark with un-

canny softness like an owl, would be difficult for one to know were it not for the weird, snappy triplets of notes that tell his name. Every one knows him far better by sound than by sight. *Whip-poor-will* (*chuck*) *whip-poor-will* (*chuck*) *whip-poor-will* (*chuck*) he calls rapidly for about two hours, just after sunset or before sunrise from some low place, fluttering his wings at each announcement. But you must be near him to hear the *chuck* at the end of each vigorous triplet; most listeners don't. In the Southern states a similar whippoorwill is known as Chuck Will's Widow, the name it calls itself at nightfall.

You might be very close indeed without seeing the plump bird, who has flattened himself lengthwise against a lichen-covered branch until you cannot tell bird from bark. Or he may be on a rock or an old, mossy log, where he rests serene in the knowledge that his mottled, dull, dark brown, gray, buff, black and white feathers blend perfectly with his resting place. He must choose a spot broad enough to support his whole body, for, like his cousin, the nighthawk, and his more distant relatives, the humming-bird and the swift, the whippoorwill's feet are too small and weak for much perching. You never see him standing erect on a twig with his toes clasped around it, but always squatting when at rest.

A narrow white band across his throat makes his depressed head look as if it had been separated from his body—a queer effect like that of the Cheshire Cat in "Alice in Wonderland." The whippoorwill's three outer tail feathers have white ends which help to distinguish him from the night-hawk. He has a little short beak, but his large mouth stretches from ear to ear, and when he flies low above the fields after sunset, this trap is kept open, like the

swift's and the swallow's, to catch any night-flying insects —mosquitoes, June bugs, gnats, and little moths—that cross his path. Long, stiffened bristles at the ends of his mouth prevent the escape of a victim past the gaping trap. On the wing the bird is exceedingly swift and graceful. He is often mistaken for a night-hawk, or even a bat.

Relying upon the protective covering of her soft plumage, the mother whippoorwill builds no nest, but lays a pair of mottled eggs in an old stump or directly on the ground in the dark woods where a carpet of dead leaves and decayed wood makes concealment perfect. Not even the oven-bird contrives that a peep at her eggs shall be so difficult. It is next to impossible to find them. Unlike the wicked cowbird, who builds no nest because she has no maternal instinct, the whippoorwill, who is a devoted mother, makes none because none is needed.

The Night-hawk

When the night-jar, bull-bat, night-hawk or mosquito-hawk is coursing low above the fields, with quick, erratic, bat-like turns, notice the white spots, almost forming a bar across his wings, for they, together with the white band near the end of his slightly forked tail, will help to distinguish him from the whippoorwill, who carries his white signals on the outer feathers of his tail. Both of these cousins wear the same colors, only they put them on differently, the whippoorwill having his chiefly mottled, the night-hawk his chiefly barred. The latter wears a broader white band across his throat. His mate substitutes buff for his white decorations.

It is the night-hawk who makes the weird, rushing, whir

ring, booming sound that one hears on still summer evenings, as though wind were blowing across the bung-hole of an empty barrel. The bird is such a high flyer, that in the dusk of the late afternoon, when he delights to sail abroad to get his dinner, one cannot always see him; but as he coasts down from the sky on his half-closed wings with tremendous speed, the rush of air through his stiff, long wing feathers makes an uncanny, aeolian music that superstitious people have declared is a bad omen. One might think he would dash out his brains in such a head-long dive through the air, but before he hits the earth, a sudden turn saves him and off he goes unharmed, skimming above the ground and catching insects after the whippoorwill's manner. He lacks the helpful bristles at the ends of his fly-trap. He is not so nocturnal in his habits as the whippoorwill. Toward the end of summer, especially, he may be seen coursing over the open country at almost any hour of the day. Once in a while, as he hunts, he calls *peent*—a sharp cry that reminds one of the meadow-lark's nasal call-note. Presently, mounting upward higher and higher, he seems to reach the very clouds, when down he coasts again, booming as he descends. Evidently he enjoys the sport as much as any schoolboy might for he repeats his sky-coasting very often without having to wait for a snow-storm. Indeed, when winter comes, he is enjoying another summer in South America. Life without insects would be impossible for him.

Like the mother whippoorwill the night-hawk makes no nest but places her two speckled treasures in some sunny spot, either on the bare ground, on a rock, or even on the flat roof of a house. Since electric lights at-

HUMMING—BIRD (Male left—Female right)

WOODPECKER (Male left—Female right)

tract so many insects to the streets of towns and villages, the enterprising night-hawk often forsakes the country to rear her children where they may enjoy the benefits of modern improvements.

The Chimney Swift

Length—5 to 5.45 inches. About an inch shorter than the English sparrow. Long wings make its length appear greater.

Male and Female—Deep sooty gray; throat a trifle lighter. Wings extend an inch and a half beyond the even tail, which has sharply pointed and very elastic quills, that serve as props. Feet are muscular, and have exceedingly sharp claws.

Range—Peculiar to North America east of the Rockies, and from Labrador to Panama.

Migrations—April. September or October. Common summer resident.

Many people persist in calling this bird the chimney swallow, although it is not even remotely related to the swallows, and its life history, as well as its anatomy, is quite different. "Rowing" toward the roof of your house, as if it used first one wing, then the other, its flight, while swift and powerful, is stiff and mechanical compared with the graceful, gliding swallow's, and its entire aspect suggests a bat. The night-hawk and whippoorwill are its relatives, and it resembles them not a little in its crepuscular habits.

The name of the chimney swift is everything it ought to be. No other birds can surpass and few can equal it in its

powerful flight, sometimes covering a thousand miles in twenty-four hours, it is said, and never resting except in its roosting places (hollow trees or chimneys of dwellings), where it does not perch, but rather clings to the sides with its sharp claws, partly supported by its sharper tail. Audubon tells of a certain plane tree in Kentucky where he counted more than nine thousand of these swifts clinging to the hollow trunk.

Old-fashioned swifts still nest in hollow trees or caves, but chimneys are so much more abundant and convenient, that up-to-date birds prefer them. Without stopping in their flight, the parent swifts snap off with their beaks or feet little twigs at the ends of dead branches, and these they carry, one by one, into a chimney, gluing them against the side until they have finished an almost flat, shelf-like lattice cradle. Where do they get their glue? Only during the nesting season do certain glands in their mouths secrete a brownish fluid that quickly gums and hardens when exposed to the air. After nursery duties have ended, the gland shrinks from disuse. When the basket has been stuck against a chimney-side, it looks as if it were covered with a thin coat of isinglass. On this lattice from four to six white eggs are laid. Mid-summer fires on the hearth sometimes melt the glue when "down tumble cradle and babies and all."

When the baby swifts are old enough to climb out of the lattice, they still cling near it for about a fortnight waiting for their wings to grow strong before they try to leave the chimney. Apparently they hang themselves up to go to sleep. Doubtless they would fall but for their short, thin, stiff-pointed tail feathers which help to prop them up where they cling to the rough bricks and mortar of the chimney

lining. Woodpeckers also prop themselves with their tail feathers, but against tree trunks. Not until swifts are a month old do the lazy little fellows climb out of their deep, dark cavern into the boundless sky, which is their true home. No birds are more tireless, rapid flyers than they. Their small feet, weak from disuse, could scarcely hold them on a perch.

With mouths agape from ear to ear, the swifts draw in an insect dinner piecemeal, as they course through the air in their peculiar, throbbing flight, just as the whippoorwill, night-hawk, and swallows do. Fortunate the house where a colony elect to live, for they rid the air of myriads of gnats and mosquitoes, as they fly about overhead, silhouetted against the sky. Early in the morning and late in the afternoon are their hours for exercise. Although the swift is actually shorter than a sparrow, its spread wings measure more than a foot across from tip to tip. No wonder it can fly every waking moment without feeling tired, and journey from Labrador to Central America for a winter holiday.

The Ruby-throated Humming-Bird

Length—3.5 to 3.75 inches. A trifle more than half as long as the English sparrow. The smallest bird we have.

Male—Bright metallic green above; wings and tail darkest, with ruddy-purplish reflections and dusky-white tips on outer tail-quills. Throat and breast brilliant metallic-red in one light, orange flame in another, and dusky orange in another. Sides greenish; underneath lightest gray, with whitish border outlining the brilliant breast. Bill long and needle-like.

Female—Without the brilliant feathers on throat; darker gray beneath. Outer tail-quills are banded with black and tipped with white.

Range—Eastern North America, from northern Canada to the Gulf of Mexico in summer. Winters in Central America.

Migrations—May. October. Common summer resident.

This smallest, most exquisite, and unabashed of our bird neighbors cannot be mistaken, for it is the only one of its kin found east of the Plains and north of Florida, although about four hundred species, native only to the New World, have been named by scientists. How does it happen that this little tropical jewel alone flashes about our northern gardens? What tempts him so far north? Every one knows that certain flowers depend upon certain insect friends to carry their pollen from blossom to blossom that they may set fertile seed; but certain other flowers depend upon the humming-bird. Only his tongue, that may be run out beyond his long, slender bill and turned around curves, could reach the drops of nectar in the tips of the wild columbine's five inverted horns of plenty, for example. The monarda or bee-balm, too, hides a sweet sip in each of its red tubes for his special benefit. So does the coral honeysuckle, the jewel-weed, and cardinal flower. There are many other flowers that cater to him, especially, by wearing his favorite color, by hiding nectar so deep that only his long tongue can drain it, and by opening in orderly succession so that he shall fare well throughout the summer, not have a feast one month and a famine the next. In addition to these flowers in Nature's garden

that minister to his needs, many that have been brought from the ends of the earth to our garden plots please him no less. The canna, nasturtium, phlox, trumpet-flower, salvia, and a host of others, delight his eye and his palate, so that it is well worth while to plant his favorites in our gardens if only for the joy of seeing him about. He is wonderfully neighborly, coming to the flower-beds or window-boxes for small insects as well as nectar, with undaunted familiarity in the presence of the family. The little bird is not always so amiable by any means. A fierce duellist, he will lunge his rapier-like bill at another hummer with deadly thrusts. A battle of the squeaking midgets in mid-air is a sorry sight.

You may know a male by the brilliant metallic-red feathers on his throat. His mate lacks these, but her brilliancy has another outlet, for she is one of the most expert nest builders in the world. An exquisitely dainty little cup of plant down, felted into a compact cradle and stuccoed with bits of lichen bound on by spider web, can scarcely be told from a knot on the limb to which it is fastened. Two eggs, not larger than beans, in time give place to two downy hummers about the size of honey-bees. Perhaps you have seen pigeons pump food down the throats of their squabs? In this same way are baby humming-birds fed. After about three weeks in the nest, the young are ready to fly; but they rest on perches the first month of their independence more than at any time afterward. No weak-footed relative of the swift could live long off the wing. It is good-bye to summer when the last humming-bird forsakes our frost-nipped northern gardens for happier hunting grounds far away.

CHAPTER XIV

CARPENTERS IN FEATHERS

FLICKER—RED-HEADED WOODPECKER—YELLOW-BELLIED WOODPECKER—DOWNY WOODPECKER—HAIRY WOODPECKER

If, as you walk through some old orchard or along the borders of a woodland tangle, you see a high-shouldered, stocky bird clinging fast to the side of a tree "as if he had been thrown at it and stuck," you may be very sure he is a woodpecker. Four of our five common, non-union carpenters wear striking black and white suits, patched or striped, the males with red on their heads, the females with less of this jaunty touch of color perhaps, or none, but wearing otherwise similar clothes. Only the dainty little black and white creeping warbler could possibly be confused with the smallest of these sturdy, matter-of-fact artisans, although chickadees, titmice, nuthatches, and kinglets also haunt the bark of trees; but the largest of these is smaller than downy, the smallest of the woodpeckers. One of the carpenters, the big flicker, an original fellow, is dressed in soft browns, yellow, white and black, with the characteristic red patch across the back of his neck.

It is easy to tell a woodpecker at sight or even beyond it, when you see or hear him hammering for a dinner, or

drumming a love song, or chiselling out a home in some partly decayed tree. How cheerfully his vigorous taps resound! Hammer, chisel, pick, drill, and drum—all these instruments in one stout bill—and a flexible barbed spear for a tongue that may be run out far beyond his bill, like the humming-bird's, make the woodpecker the best-equipped workman in the woods. All the other birds that pick insect eggs, grubs, beetles, and spiders from the bark could go all over a tree and feast, and the woodpecker might follow them and still find plenty left, borers especially, hidden so deep that only his sticky, barbed tongue could drag them out.

When his body is flattened against the tree's side you wonder why he doesn't fall off. For the same reason that the swifts, that sleep against the inside walls of chimneys, do not fall down to the hearths below. Like them and the bobolink, woodpeckers prop themselves by their outspread, stiffened tails. Moreover, they have their toes arranged in a curious way—two in front and two behind, so that they can hold on to a section of bark very much as an iceman holds a piece of ice between his tongs. Smooth bark conceals no larvae nor does it offer a foothold, which is why you are likely to see woodpeckers only on the trunks or the larger limbs of trees where old, scaly bark grows.

The Flicker

Length—12 to 13 inches. About one fourth as large again as the robin.

Male and Female—Top of head and neck bluish gray, with a red crescent across back of neck and a black crescent on breast. Male has black cheek-patches that are

wanting in female. Golden brown shading into brownish gray, and barred with black above. Underneath light milky chocolate spotted with black. Wing linings, shafts of wing, and tail-quills bright yellow. White patch on lower back above tail, conspicuous when the bird flies.

Range—United States, east of Rockies; Alaska and British America, south of Hudsons Bay. Occasional on Pacific Slope.

Migrations—Most commonly seen from April to October.

If we were to follow the thirty-six aliases by which this largest and commonest of our five common woodpeckers is known throughout its wide range, we should find all its peculiarities of color, flight, noises, and habits indicated in its popular names, some of which are golden-winged woodpecker, yellow hammer, high hole, yarup, and pigeon woodpecker. It cannot but attract attention wherever seen, with its beautiful plumage, conspicuously yellow if its outstretched wings are looked at from below, conspicuously brown if seen upon the ground. At a distance it suggests the meadow-lark although it has no yellow breast. Both of these big brown birds wear black crescent breast decorations, however, and the flicker also has the habit of feeding upon the ground, especially in autumn, a characteristic not shared by its relations. It may be easily distinguished by the white patch on its lower back seen as it flies away.

Early in the spring this bird of many names and many voices makes itself known by a long, strong, sonorous call, like a prolonged jovial laugh, *Wicky-wick-wick-wick*!

FLICKER (Male)

YELLOW–BILLED CUCKOO

which differs from its rapidly repeated, mellow, and musical *cuh, cuh, cuh, cuh, cuh,* and the rolling tattoo of the nesting season. Its nasal *kee-yer,* vigorously called out in the autumn, is less characteristic, however, than the sound it makes while associating with its fellows—a sound that may be closely imitated by the swishing of a switch. *Yar-up* is another call.

See the flicker feeding on the ground instead of on the striped and mottled tree trunks, where its black and white striped relatives are usually found, and you will realize that it wears brown clothes, finely barred, because they harmonize so perfectly with the brown earth. What does it find on the ground that keeps it there so much of the time? Look at the spot it has just flown from and you will doubtless find ants. These are its chief diet. Three thousand of them, for a single meal, it has been known to lick out of a hill with its long, round, extensile, sticky tongue. But it likes acorns, too. Evidently this lusty woodpecker needs no tonic. Its tail, which is less rounded than its cousins', proves that it has little need to prop itself against tree trunks to pick out a dinner; and its curved bill, which is more of a pickaxe than a hammer, drill, or chisel, is little used as a carpenter's tool except when a high hole is to be dug out of soft, decayed wood for a nest and winter home. The funny fellow spreads his tail and dances when he goes a-courting.

Flickers condescend to use old holes deserted by their relatives who possess better tools. You must have noticed all through these bird biographies that the structure and coloring of every bird are adapted to its kind of life, each member of the same family varying according to its habits. The kind of food a bird eats and its method of

getting it, of course, bring about most, if not all, of the variations from the family type. Each is fitted for its own life, "even as you and I."

Like the pigeon, the humming-bird, and several other birds, parent flickers pump partly digested food from their own crops into those of their hungry fledglings. Luckily they do not need to carry ants to them one by one.

The Red-headed Woodpecker

Length—8.5 to 9.75 inches. An inch or less smaller than the robin.

Male and Female—Head, neck, and throat crimson; breast and underneath white; back black and white; wings and tail blue black, with broad white band on wings conspicuous in flight.

Range—United States, east of Rocky Mountains, except New England, and north to Manitoba.

Migrations—Abundant but irregular.

A pair of red-headed woodpeckers, who made their home in an old tree next the station yard at Atlanta, where locomotives clanged, puffed, whistled, and shrieked all day long, evidently enjoyed the noise, for the male liked nothing better than to add to it by tapping on one of the glass non-conductors around which a telegraph wire ran. When first the handsome, tri-colored fellow was seen there he was almost enveloped in a cloud of smoke escaping from a puffing locomotive on the track next the telegraph pole, yet he tapped away unconcerned and as merrily as you would play a two-step on the piano. When the vapor

blew away, his glossy bluish black and white feathers, laid on in big patches, were almost as conspicuous as his red head, throat, and upper breast.

All the woodpeckers have musical tastes. Tin roofs, leaders, and gutters everywhere are popular tapping places. Certain dry, dead, seasoned limbs of hardwood trees resound better than others and a woodpecker in love is sure to find out the best one in the spring when he beats a rolling tattoo in the hope of charming his best beloved. He has no need to sing, which is why he doesn't.

Fence posts are the red-head's favorite resting places. From these he will make sudden sallies in mid-air, like a flycatcher, after a passing insect; then return to his post.

The blue jay has the thrifty habit of storing nuts for the proverbial rainy day, and the shrike hangs up his meat to cure on a thorn tree like a butcher. Red-headed woodpeckers, who are especially fond of beechnuts, acorns, and grasshoppers, hide them away, squirrel fashion, in tree cavities, in fence holes, crevices in old barns, between shingles on the roof, behind bulging boards, in the ends of railroad ties, in all sorts of queer places, to feast upon them in winter when the land is lean. Who knows whether other woodpeckers have hoarding places? The sapsucker, the hairy and the downy woodpeckers also like beechnuts; the flicker prefers acorns; but do they store them for winter use? The red-head's thrifty habit was only recently discovered: has it been only recently acquired? It must be simpler to store the summer's surplus than to travel to a land of plenty when winter comes. Heretofore this red-headed cousin has been reckoned a migratory member of the home-loving woodpecker clan, but only where he could not find plenty of food to keep him through the winter.

The Yellow-bellied Woodpecker

Length—8 to 8.6 inches. About one fifth smaller than the robin.

Male—Black, white, and yellowish white above, with bright red crown, chin, and throat. Breast black, in form of crescent. A yellowish white line, beginning at bill and passing below eye, merges into the pale yellow of the bird underneath. Wings spotted with white, and coverts chiefly white. Tail black; white on middle of feathers.

Female—Paler and with head and throat white.

Range—Eastern North America, from Labrador to Central America.

Migrations—April. October. Resident north of Massachusetts.

This woodpecker commonly called the sapsucker I am sorry to introduce to you as the black sheep of his family, with scarcely a friend to speak a good word for him. Murder is committed on his immensely useful relatives, who have the misfortune to look ever so little like him simply because ignorant people's minds are firmly fixed in the belief that every woodpecker is a sapsucker, therefore a tree-killer, which only this miscreant is, and very rarely. The rest of the family who drill holes in a tree harmlessly, even beneficially, do so because they are probing for insects. The sapsucker alone drills rings or belts of holes for the sake of getting at the soft, nutritious inner bark, the cambium layer, and drinking the sap that trickles from it.

Mrs. Eckstorm, who has made a careful study of the

woodpeckers in a charming little book that every bird-lover should read, tells of a certain sapsucker that came silently and early in the autumn mornings to feed on a favorite mountain ash tree near her dining-room window. In time this rascal killed the tree. "Early in the day he showed considerable activity," writes Mrs. Eckstorm, "flitting from limb to limb and sinking a few holes, three or four in a row, usually *above* the previous upper girdle of the limbs he selected to work upon. After he had tapped several limbs, he would sit patiently waiting for the sap to flow, lapping it up quickly when the drop was large enough. At first he would be nervous, taking alarm at noises and wheeling away on his broad wings till his fright was over, when he would steal quietly back to his sapholes. When not alarmed, his only movement was from one row of holes to another, and he tended them with considerable regularity. As the day wore on he became less excitable, and clung cloddishly to his tree trunk with ever-increasing torpidity, until finally he hung motionless as if intoxicated, tippling in sap, a dishevelled, smutty, silent bird, stupefied with drink, with none of that brilliancy of plumage and light-hearted gaiety which made him the noisiest and most conspicuous bird of our April woods."

But it must be admitted that very rarely does the sapsucker girdle a tree with holes enough to sap away its life. He may have an orgy of intemperance once in a while, but much should be forgiven an erring one as dexterous as a flycatcher in taking insects on the wing and with a hearty appetite for pests. Wild fruit and soft-shelled nuts he likes, too. He never bores a tree to get insects as his cousins do, for only when a nest must be chiselled out is he a wood *pecker* in the strict sense.

The Downy Woodpecker

Length—6 to 7 inches. About the size of the English sparrow.

Male and Female—Black above, striped with white. Tail shaped like a wedge. Outer tail feathers white, barred with black. Middle tail feathers black. A black stripe on top of head, and distinct white band over and under the eyes. Red patch on nape of neck—lacking in female. Wings with six white bands crossing them transversely; white underneath.

Range—Eastern North America, from Labrador to Florida.

Migrations—Resident all the year throughout its range.

A hardy little friend is the downy woodpecker who, like the chickadee, stays by us the year around. Probably no other two birds are so useful in our orchards as these, that keep up a tireless search for the insect robbers of our fruit. Wintry weather can be scarcely too severe for either, for both wear a warm coat of fat under their skins and both have the comfort of a snug retreat when bitter blasts blow.

Downy is too good a carpenter to neglect making a cozy cavity for himself in autumn, just as the hairy woodpecker does. The chickadee, titmouse, nuthatches, bluebird, wren, tree swallow, sparrow-hawk, crested flycatcher, and owls, are not the only birds that are thankful to occupy his snug quarters in some old tree after he has moved out in the spring to the new nursery that his mate and he make for their family. He knows the advantage of a southern exposure for his hollow home and chisels his winter quarters deep enough to escape a draft. Here he lives in single

blessedness with no thought now for the comfort of his mate, who, happily, is quite as good a carpenter as he, and as able to care for herself. She may make a winter home or keep the nursery.

Very early in the spring you will hear the downy, like the other woodpeckers, beating a rolling tattoo on some resonant limb, and if you can creep close enough you will see his strong head hammering so fast that there is only a blur above his shoulders. This drumming is his love song. The grouse is even a more wonderful performer, for he drums without a drum, which no woodpecker can do. The woodpecker drums not only to win a mate, however, but to tell where a tree is decayed and likely to be an easy spot to chisel, and also to startle borers beneath the bark, that he may know just where to tunnel for them, when they move with a faint noise, which his sharp ears instantly detect.

This master workman, who is scarcely larger than an English sparrow, occasionally pauses in his hammering long enough to utter a short, sharp *peek*, *peek*, often continued into a rattling cry that ends as abruptly as it began. You may know him from his larger and louder-voiced cousin, the hairy woodpecker, not only by this call-note, but by the markings of the outer tail feathers, which, in the downy, are white barred with black; and in the hairy, are white without the black bars. Both birds are much striped and barred with black and white and the novice could confuse them only with the black and white creeping warbler.

When the weather grows cold, hang a bone with a little meat on it, cooked or raw, or a lump of suet in some tree beyond the reach of cats; then watch for the downy wood-

pecker's and the chickadee's visits to your free-lunch counter.

The Hairy Woodpecker

Light woods, with plenty of old trees in them, suit this busy carpenter better than orchards or trees close to our homes, for except during the winter months, he is more shy than his sociable little cousin, downy, whom he as closely resembles in feathers as in habits. He is three inches longer, however, yet a little smaller than a robin. In spite of his name, he is covered with black and white feathers, not hairs. He has a hairy stripe only down the middle of his broadly striped white and black back; but the unspotted white outer tail feathers are his distinguishing marks. The female lacks his red head decoration.

After he and his mate have decided to go to housekeeping, they select a tree—a hollow-hearted or partly decayed one is preferred—and begin the hard work of cutting out a deep cavity. Try to draw freehand a circle by making a series of dots, as the woodpecker outlines his round front door, and see, if you please, whether you can make so perfect a ring. Downy's entrance need be only an inch and a half across; the hairy's must be a little larger, and the flicker requires a hole about four inches in diameter to admit his big body. Both mates work in turn at the nest hole. How the chips fly! Braced in position by stiff tail feathers and clinging by his stout toes, the woodpecker keeps hammering and chiselling at his home more hours every day than a labor union would allow. Two inches of digging with his strong combination tool means a hard day's work. The hole usually runs straight in for a few inches, then curves downward into a pear-shaped cham-

SCREECH OWL (Brown and Gray)

BARN OWL

ber large enough for a comfortable nursery. A week or ten days may be spent by a couple in making it. The chips by which this good workman is known are left on the nursery floor, for woodpeckers do not pamper their babies with fine grasses, feathers, or fur cradle linings, as the chickadee and some other birds do. A well-regulated woodpecker's nest contains five glossy-white eggs.

Sheltered from the rain, wind, and sun, hidden from almost every enemy except the red squirrel, the little woodpeckers lie secure in their dark, warm nursery, with no excitement except the visits of their parents with a fat grub. Then how quickly they scramble up the walls toward the light and dinner!

CHAPTER XV

KINGFISHER AND CUCKOOS

BELTED KINGFISHER—YELLOW-BILLED AND BLACK-BILLED CUCKOOS

The Belted Kingfisher

Length—12 to 13 inches. About one fourth as large again as the robin.

Male—Upper part grayish blue, with prominent crest on head reaching to the nape. A white spot in front of the eye. Bill longer than the head, which is large and heavy. Wings and the short tail minutely speckled and marked with broken bands of white. Chin, band around throat, and underneath white. A bluish band across upper breast and a bluish wash on sides.

Female—Female and immature specimens have rusty bands where the adult male's are blue. Plumage of both birds oily.

Range—North America, except where the Texan kingfisher replaces it in a limited area in the Southwest. Common from Labrador to Florida, east and west. Winters chiefly from Virginia southward to South America.

Migrations—March. December. Common summer resident. Except in frozen northern limits of range, usually a winter resident also.

This Izaak Walton of birddom, whom you may see perched as erect as a fish hawk on a snag in the lake, creek, or river, or on a dead limb projecting over the water, on the lookout for minnows, chub, red fins, samlets, or any other small fry that swims past, is as expert as any fisherman you are ever likely to know. Sharp eyes are necessary to see a little fish where sunbeams dance on the ripples and the refracted light plays queer tricks with one's vision. Once a victim is sighted, how swiftly the lone fisherman dives through the air and water after it, and how accurately he strikes its death-blow behind the gills! If the fish be large and lusty it may be necessary to carry it to the snag and give it a few sharp knocks with his long, powerful bill to end its struggles. These are soon over, but the kingfisher's have only begun. See him gag and writhe as he swallows his dinner, head first, and then, regretting his haste, brings it up again to try a wider avenue down his throat. Somebody shot a kingfisher which had tried to swallow so large a fish that the tail was sticking out of his mouth, while its head was safely stored below in the bird's crop. After the meat digests, the indigestible skin, bones, and scales of the fish are thrown up without the least nausea.

A certain part of a favorite lake or stream this fisherman patrols with a sense of ownership and rarely leaves it. Alone, but self-satisfied, he clatters up and down his beat as a policeman, going his rounds, might sound his rattle from time to time. The bird knows every pool where minnows play, every projection along the bank where a fish might hide, and is ever on the alert, not only to catch a dinner, but to escape from the sight of the human being who intrudes on his domain and wants to "know" him.

You cannot mistake this big, chunky bird, fully a foot long, with grayish-blue upper parts, the long, strong wings, and short, square tail dotted in broken bars of white, and with a heavy bluish band across his white breast. His mate and children wear rusty bands instead of blue. The crested feathers on top of his big, powerful head reach backward to the nape like an Indian chief's feather war-bonnet, and give him distinction. Under his thick, oily plumage, as waterproof as a duck's, he wears a suit of down underclothing.

No doubt you have heard that all birds are descended from reptile ancestors; that feathers are but modified scales, and that a bird's song is but the glorified hiss of the serpent. Then the kingfisher and the bank swallow retain at least one ancient custom of their ancestors, for they still place their eggs in the ground. The lone fisherman chooses a mate early in the spring and, with her help, he tunnels a hole in a bank next a good fishing ground. A minnow pool furnishes the most approved baby food. Perhaps the mates will work two or three weeks before they have tunnelled far enough to suit them and made a spacious nursery at the end of the long hall. Usually from five to eight white eggs are laid about six feet from the entrance on a bundle of grass, or perhaps on a heap of ejected fish bones and refuse. While his queen broods, the devoted kingfisher brings her the best of his catch. At first their young are as bare and skinny as cuckoos. When the father or mother bird flies up-stream with a fish for them, giving a rattling call instead of ringing a dinner bell, all the hungry youngsters rush forward to the mouth of the tunnel; but only one can be satisfied each trip. Then all run backward through the inclined tunnel, like

reversible steam engines, and keep tightly huddled together until the next exciting rattle is heard. Both parents are always on guard to drive off mink, rats, and water snakes, that are the terrors of their nursery.

The Yellow-billed and Black-billed Cuckoos

Length—11 to 12 inches. About one fifth longer than the robin.

Male and Female—Grayish brown above, with bronze tint in feathers. Underneath grayish white. Bill, which is as long as head, arched, acute, and more robust than the black-billed species, and with lower mandible yellow. Wings washed with cinnamon-brown. Tail has outer quills black, conspicuously marked with white thumb-nail spots. Female larger.

Range—North America, from Mexico to Labrador. Most common in temperate climates. Rare on Pacific Slope.

Migrations—Late April. September. Summer resident.

Kak, k-kuk, k-kuk, k-kuk! like an exaggerated tree-toad's rattle, is a sound that, when first heard, makes you rush out of doors instantly to name the bird. Look for him in the depths of the tall shrubbery or low trees, near running water, if there is any in the neighborhood, and if you are more fortunate than most people, you will presently see the yellow-billed cuckoo glide silently among the foliage, and perform some active, graceful evolutions there. When seen at a little distance, his large, slim body, grayish brown, with olive tints above and whitish

below, can scarcely be distinguished from that of the black-billed species which has a similar unmusical guttural, *kr-r-ruck*, *kr-r-ruck* rattle and some *cow*, *cow*, *cow* notes run together. It is not until you get close enough to note the yellow bill, reddish brown wings, and black tail feathers with their white "thumb-nail" marks, that you know which cuckoo you are watching. If you were to dip your thumb in white paint, then pinch the outer quills of the yellow-billed cuckoo's dark tail feathers, you would leave similar marks.

Most birds will not touch the hairy, fuzzy caterpillars —very disagreeable mouthfuls, one would think. But happily cuckoos enjoy them as well as the smooth, slippery kind. "I guess they like the custard inside," said a little boy who had stepped on a fat caterpillar on the garden path. "Cuckoos might well be called caterpillar birds," wrote Florence Merriam Bailey, "for they are so given to a diet of the hairy caterpillars that the walls of their stomachs are actually permeated with the hairs, and a section of stomach looks like the smoothly brushed top of a gentleman's beaver hat." When you see the webs that the tent caterpillar, toward the end of summer stretches across the ends of the branches of fruit and nut trees, especially wild cherry trees—watch for the cuckoo's visits. Orioles, also, tear open the webs to get at the wiggling morsels inside, but they leave dead and mutilated remains behind them, showing that their appetite for web worms is less keen that that of the cuckoos, who eat them up clean. Fortunately the caterpillar of the terribly destructive gypsy moth is another favorite dainty.

Perhaps you have heard that the cuckoo, like the cowbird, builds no nest and lays its eggs in other birds'

cradles? This is true only of the European cuckoo, that we all know in cuckoo clocks and the pages of Chaucer, Shakespeare, and other English poets. Its American cousin makes a poor apology for a nest, it is true, merely a loose bundle or platform of sticks, as flimsily put together as a dove's nest. The greenish-blue eggs or the naked babies must certainly fall through, one would think. Still—poor thing though it be—it is all the cuckoos' own, and they are proud of it. But so sensitive and fearful are they when a human visitor inspects their nursery that they will usually desert it, never to return, if you touch it, so beware of peeping!

When the skinny cuckoo babies are a few days old, blue pin-feathers begin to appear, and presently their bodies are stuck full of fine, sharply pointed quills like a well-stocked pin cushion or a "fretful porcupine." But presto! every pin-feather suddenly fluffs out the day before the youngsters leave the nest, and they are clothed in a suit of soft feathers like their parents. In a few months young cuckoos, hatched as far north as New England and Canada or even Labrador, are strong enough to fly to Central or South America to spend the winter.

CHAPTER XVI

NIGHT AND DAY GAME HUNTERS

SCREECH OWL—BARRED OWL—SHORT-EARED OWL—LONG-EARED OWL—BARN OWL—OSPREY—SPARROW-HAWK—BALD EAGLE AND GOLDEN EAGLE—RED-SHOULDERED HAWK—RED-TAILED HAWK—COOPER'S HAWK AND THE SHARP-SHINNED HAWK—MARSH HAWK—TURKEY VULTURE

The Screech Owl

Length—8.5 to 9.5 inches. About as long as a robin.

Male and Female—Brownish red phase: Upper parts rusty red, finely streaked with blackish brown and mottled with light brown; under parts whitish or buff, the feathers centrally streaked with black and with irregular rusty bars. Eyes yellow; legs and feet covered with short feathers; prominent ear tufts. *Gray phase:* Upper parts ashen gray streaked with black and finely mottled with yellow; under parts white, finely streaked and barred irregularly with black, more or less bordered with rusty. Immature birds have entire plumage regularly barred with rusty, gray, and white.

Range—Eastern North America.

Season—Permanent resident.

SPARROW—HAWK

RED–SHOULDERED HAWK

Owls have a peculiarly flexible, reversible hind toe; eyes not capable of being rolled but set firmly in the sockets, necessitating the turning of the head to see in different directions; feathered discs around the eyes; loose, mottled plumage, some species with feathered ear tufts (horns), others without; hooked beaks and muscular feet for perching and for grasping prey and the ability to fly almost silently—these are their chief characteristics. Birds of the woodland, more rarely of grassy marshes and plains, nearly all nocturnal in habits, since their food consists mostly of small mammals that steal abroad at night to destroy the farmer's crops, the owls are among the most valuable of birds to the agriculturist. Unless too large, the prey is bolted entire—the hair, claws, bones, etc., being afterward ejected in matted pellets.

Why the little screech owl should wear such freaky plumage as that described above—rusty red one time, mottled gray and black another, without reference to age, sex, or season, is one of the bird mysteries awaiting solution. Frequently birds of the same brood will be wearing different colored feathers. In the transition from one phase to another, many variations of color and markings appear; but however clothed, we may certainly know the little screech owl by its prominent ear tufts or horns, taken in connection with its small size. Like the little saw-whet owl, which, however, wears no horns, people who live in cities are most familiar with it on women's hats, worn entire or cut up in sections.

A weird, sweet, whistled shivering tremolo from under our very windows startles us, as the uncanny voices of all owls do, however familiar we may be with the little screecher. Are any superstitions more absurd than those

associated with these harmless birds? Because it makes its home so near ours, often in some crevice of them, in fact, in the hollow of a tree in the orchard, or around the barn lofts, this is probably the most familiar owl to the majority of Canadians and Americans. It keeps closely concealed by day, often in a dense evergreen or in its favorite hollow; and we should not know of its near-by presence in the neighborhood except for the persecutions of the blue jay which takes a mischievous delight in rousing it from its slumbers for the little song birds to mock at as it flies, bewildered and blinded by the sunlight.

The Barred Owl

Length—18 to 20 inches; female the larger.

Male and Female—Upper parts grayish brown, each feather with two or three white or buff bars; facial disk gray, finely barred or mottled with dusky; eyes bluish black, and bill yellow; under parts white washed with buff; the breast barred; the sides and underneath streaked with dusky; legs and feet feathered to nails; wings and tail barred with brown; no ear tufts.

Range—Eastern United States to Nova Scotia and Manitoba; west to Minnesota, Nebraska, Kansas, and Texas; nesting throughout range.

Season—Permanent resident.

Whoo-whoo-too-whoo-too-o-o, with endless variation, a deep-toned, guttural, weird, startling sound, like the wail of some lost soul asking its way through the dark, and *haw-haw-hoo-hoo*, like a coarse, mocking laugh, come from this noisy hoot owl between dusk and midnight, rarely at

sunrise, more rarely still by day, sometimes from a solitary hooter, sometimes in a duet sung out of time. Every one knows the hoot, but few people who know its voice will ever see its smooth round head and bland, almost human face. One hears it most frequently at the nesting season. Once in a very great while this owl gives a shriek to make one's blood curdle. Many of us have attracted the bird by imitating its notes. Because the voice of the great horned owl, that "Lord High Executioner," is so like it, the barred owl is credited with its larger kinsman's atrocities and shot. Its own talons are not wholly guiltless of innocent blood, to be sure, since out of one hundred and nine stomachs examined for the Department of Agriculture, five contained young poultry or game, and thirteen other birds; but more than one third contained mice and other small mammals; frogs, fish, lizards, and insects filled the remainder, which goes to prove that, in spite of the average farmer's belief to the contrary, this owl renders him positive service.

"As useless as a last year's nest," can have no meaning to a pair of these hardy owls that go about toward the end of winter looking for a deserted woodpecker's nest or a hawk's, crow's, or squirrel's bulky cradle in some tree-top. Ever after they hold it as their own. They are the largest common owls of the family, and few dispossessed owners care to dispute their rights.

The Short-eared Owl

Length—14 to 17 inches; female the larger.

Male and Female—Ear tufts inconspicuous; face disk white, or nearly so, minutely speckled with blackish, and with

large black eye patches and yellow eyes; upper parts dusky brown, the feathers margined with yellow; under parts whitish or buff, the breast broadly streaked, never mottled, with brown, and underneath more finely and sparingly streaked; tail barred with buff and dusky bands of equal width. Bill and claws dusky blue black; legs feathered with buff.

Range—Nearly cosmopolitan; throughout North America, and nesting from Virginia northward.

Season—Chiefly a migratory visitor; April, November; also a resident in many sections.

Here is an owl that breaks through several family traditions, for it does not live in woods, neither does it confine its hunting excursions to the dark hours; but, living in the marshes or grassy meadows, it frequently flies abroad by day, especially in cloudy weather, after two o'clock in the afternoon, as well as at night. Another unconventional trait it has: it makes its nest of hay and sticks on the ground instead of in hollow trees or upper parts of buildings; and one nest that contained six white eggs, discovered in a lonely marsh where the bittern was the owl's nearest neighbor, was in a tussock quite surrounded by water. The bittern, that misanthropic recluse, springing into the air, was off at once, dangling its legs behind it; whereas the marsh owl, as this is sometimes called, is not at all shy, and simply stared and blinked, with a half-human expression of wonder on its face, until the intruder became too impertinent and lifted it off its nest. Even then it did nothing more spiteful than to sharply click its bill as it circled about just overhead. Yet there seems to be a popular

impression that this owl is fierce. In the West the burrows of ground squirrels and rabbits or the hole of a muskrat have been utilized, since none of the owls is overscrupulous about appropriating other creatures' homes, however much attached a pair may become to a spot that has once cradled their brood. Still another peculiarity of this owl is that it is almost never seen to alight on a tree; the ground is its usual resting place, a stump or knoll a high enough point of vantage. Mice, gophers, and insects of various kinds, which are its food, keep this hunter close to earth; and as it flies low, and does not take to wing until fairly stepped on, it encourages close acquaintance, thereby earning a reputation for being the most abundant species in the United States.

The Long-eared Owl or Cat Owl

This bird, of richer coloring than the preceding and with long tufts or horns, is about the same size, but more nocturnal in its habits, and it favors drier wooded habitats. Most of this horned owl's nests (frequently the former home of a crow of hawk) are in trees. It is chiefly at the nesting season that these usually silent birds lift up their voices. "When at ease and not molested," says Captain Bendire, "the few notes which I have heard them utter are low toned and rather pleasing than otherwise. One of these is a soft-toned *wu-hunk, wu-hunk*, slowly and several times repeated. . . . Another is a low, twittering, whistling note, like *dicky, dicky, dicky*, quite different from anything usually expected from the owl family. In the early spring they hoot somewhat like a screech owl, and may often be heard on a still evening; but their notes are more subdued than

those of the latter." The most common cry of the long-eared owl, the one that has given it its popular name, is a prolonged *me-ow-ow-ow*, so like a cat's cry that it would seem folly for a bird that lives chiefly on mice to utter it.

The Barn Owl

Length—15 to 18 inches; female the larger.
Male and Female—Upper parts mottled gray and buff finely speckled with black and white; heart-shaped facial disks and under parts whitish or buff, the latter with small round black spots; tail white or buff, mottled with black, and sometimes with three or four narrow black bars like the wings; eyes small, black; no horns; long, feathered legs; long, pointed wings reaching beyond tail.
Range—United States, rarely reaching Canada, south to Mexico, nesting from New York State southward.
Season—Permanent resident, except at northern limit of range.

The American counterpart of "wise Minerva's only fowl," known best by its startling scream, keeps its odd, triangular face, its speckled and mottled downy feathers, and its body, that looks more slender than it really is, owing to its long wings, well concealed by day; and so silently does it move about at night that only in the moonlight can one hope for a passing glimpse as the barn owl sails about on a wide-spread tapering monoplane, and with a hawk-like movement, from tree to tree. "The face looks like that of a toothless, hooked-nosed old woman, shrouded in a closely fitting hood," says Mrs. Wright, "and has a

half-simple, half-sly expression that gives it a mysterious air." It is often called the monkey-faced owl.

By day all owls look sleepy and sad, but at dusk, when rats and mice creep timidly forth, the barn owl, now thoroughly awake, sallies from its hole and does greater execution before morning than all the traps in town. Shrews, bats, frogs, grasshoppers, and beetles enlarge its bill of fare. A pair of these mousers that had their nest in an old apple tree near a hayrick that concealed the spectator, brought eight mice to their brood in the hollow trunk in less than an hour.

The head of a mouse, the favorite tid-bit, is devoured first; then follows the body, bolted whole if not too large. One foot usually holds the smaller quarry; but a rat must be firmly grasped with both feet, and torn apart, before it is bolted. Since owls swallow skins, bones, and all, these indigestible parts are afterward ejected in pellets. Disturb the owls at their orgy, and they click their bills and hiss in the most successful attempt they ever make to be ferocious. They are not quarrelsome even among themselves when feeding, and the smallest songster can safely tease them to a point that would goad a less amiable bird to rashness. A querulous, quavering cry frequently repeated, *k-r-r-r-r-r-r-ik*, suggesting the night jar's call, is sometimes more frequently heard than the wild, peevish scream usually associated with this owl.

In spite of civilization's tempting offers, a hollow tree has ever remained the favorite home of the barn owl, that nevertheless deserves its name, for barns and other outbuildings on the farm, steeples, and abandoned dove cots become equally dear to it once they have sheltered a brood. A pair of these owls nested for years in one of the towers of

the old Smithsonian Institution; many eggs have been laid directly on roofs of dwellings; some in mining shafts; others in deserted burrows of ground squirrels and other rodents; in fact, all manner of queer sites are chosen. Strictly speaking, the barn owl builds no nest, unless the accumulation of decayed wood, disgorged bones of mice, etc., among which the eggs are dropped, could be honored with such a name. From five to eleven pure, dull-white eggs, more decidedly pointed than those of most owls, are incubated by both mates, sometimes by both at once, as they sit huddled together through the hours of unwelcome sunshine. They can scarcely multiply too fast. The barn owl does not eat poultry, although it is constantly shot because of an unfounded belief prevalent among farmers that it does. From an economic standpoint, it would be difficult to name a more valuable bird.

The Osprey

Length—Male 2 feet, or a trifle less; female larger.

Male and Female—Upper parts dusky brown, the feathers edged with white as a bird grows old; head and nape varied with white and a dark stripe on side of head; under parts white; the breast of male sometimes slightly, that of female always, spotted with grayish brown; tail with six or eight obscure dark bars. Bill blackish and with long hook.

Range—North America from Hudsons Bay and Alaska to the Equator; nesting throughout its North American range.

Season—Summer resident. March to October, except in southern part of range.

Is there a more exhilarating sight in the bird kingdom than the plunge of the osprey? From the height where it has been circling and coursing above the water, it will quickly check itself and hover for an instant at sight of a fish swimming near the surface; then, closing its great wings, it darts like a streak of lightning, and with unerring aim strikes the water with a loud splash. Perhaps it will disappear below for a second before it rises, scattering spray about it in its struggles to clear the surface, and fly upward with its prey grasped in its long, powerful, rough talons, perfectly adapted for holding slippery prey. The fish is never carried tail end foremost; if caught so, the osprey has been seen turning it about in mid-air. Small fry are usually eaten awing; larger game are borne off to a perch, to be devoured at leisure; and it is said that when an osprey strikes its talons through the flesh of a fish too heavy to be lifted from the water, the prey turns captor and drowns his tormentor, whose claws reaching his vitals soon end his life, when bird and fish, locked in a death grasp, are washed ashore. The osprey rarely touches fish of value for the table; catfish, suckers, and such prey as no one grudges it form its staple food. Little wonder it is often called the fish hawk. Ospreys and hawks belong to distinct families, however, and strictly speaking this bird is not a hawk at all.

The bald eagle, perched at a high point of vantage, takes instant note of a successful fisher, and with a majestic swoop arrives before the osprey has a chance to devour its prey. Now a desperate chase begins if the intimidated bird has not already relaxed its grasp of the prize; and pursuing the osprey higher and higher, the eagle relentlessly torments it until it is glad to drop the fish for the pirate to

seize and bear away, leaving it temporary peace. Again the industrious osprey secures a glistening, wriggling victim; again the eagle pursues his unwilling purveyor. After unmerciful persecution, a number of ospreys will band together and drive away the robber.

Birds of this order show strong affection for their life-long mates and the young, and for an old nest that is often a true home at all seasons, and to which they return year after year if unmolested, simply repairing damages inflicted by winter storms. The osprey also shows a marked preference for a certain perch to which it carries its prey, and there it will sit sometimes for hours at a time. The ground below is heavily strewn with bones, scales, and other indigestible parts of fish. An immense accumulation of sticks, rushes, weed stalks, shredded bark, salt hay, odds and ends gathered among the rubbish of seaside cottages, feathers, and mud make old nests, with their annual additions, bulky, conspicuous affairs in the tree-tops. New nests are comparatively small platforms of sticks, considering the size of the bird. Both mates incubate. Colonies of nesters are frequently reported along our coasts, and instances of a pair of grackles utilizing a corner of the osprey's ample cradle for theirs are not rare. In four weeks or less after their eggs are laid, the ospreys are kept busy shredding food for their downy, helpless young. One may readily name them by their white under parts.

The Sparrow-hawk

Length—10 to 11 inches. Sexes the same size, a little larger than the robin.

Male—Top of head slaty blue, generally with a reddish

spot on crown, and several black patches on sides and nape; back rusty brown, with a few black spots or none; wing coverts ashy blue with or without black spots; tail bright rufous, white tipped, and with a broad black band below it, the outer feathers white with black bars; under parts white or buff, sometimes spotted with black.

Female—Back, wing coverts, and tail rufous with numerous black bars; under parts plentifully streaked with dark brown.

Range—Eastern North America, from Great Slave Lake to northern South America. Nests from northern limits of range to Florida; winters from New Jersey southward.

Season—Summer resident in the northern United States and Canada; March to October; winter or permanent resident south of New Jersey.

Perched on a high, dead limb, the crossbar of a telegraph pole, a fence post, or some distended branch—such a point of vantage as a shrike would choose for similar reasons—the beautiful little sparrow-hawk eagerly scans the field below for grasshoppers, mice, hair sparrows, and other small quarry to come within range. The instant its prey is sighted, it launches itself into the air, hovers over its victim, then drops like a stone, seizes it in its talons, and flies back to its perch to feast. It is amusing to watch it handle a grasshopper, very much as a squirrel might eat a nut if he had but two legs. Or, becoming dissatisfied with its hunting grounds, it will fly off over the fields gracefully, swiftly, now pausing on quivering wings to reconnoitre, now

on again, past the thickets on the outskirts of woods, through the orchard and about the farm, suddenly arresting flight to pounce on its tiny prey. Its flight is not protracted nor soaring. Never so hurried, so swift, or so fierce as other small hawks, it is none the less active, and its charming, hovering posture gives its flight a special grace. *Kill-ee-kill-ee-kill-ee* it shrilly calls as it flies above the grass. Every farmer's boy knows the voice of the killy hawk which is not a true hawk but a falcon. Less shy of men than others of its tribe, showing the familiarity of a robin toward us, one frequently sees several little hunters on the same acre, especially around the bird roosts in the spring and autumn migrations. The sparrow-hawk would be a universal favorite were it not for its rascality in devouring little birds. So long as there is a grasshopper or a meadow mouse to eat, it will let feathered prey alone; but these failing, it is a past master in dropping like a thunderbolt upon the tree sparrows, juncos, thrushes, and other small birds found near the ground in thickets and woodland borders. It does not touch little chickens, however. Of the three hundred and twenty stomachs examined for the Department of Agriculture, not one contained a chick; but eighty-nine contained mice and two hundred and fifteen contained grasshoppers and other large insects.

Unlike other birds of prey the sparrow-hawk builds no nest, but lays its eggs in the hollows of trees, the crevices of rocks, or in the outbuildings of a farm; but a deserted woodpecker's hole is its ideal home. In different parts of the country this beautifully colored little hunter is known as the rusty-crowned falcon, the kestrel, the killy hawk, and the mouse hawk.

The Bald Eagle and the Golden Eagle

Length—Male 30 to 33 inches; female 35 to 40 inches.
Male and Female—Head, neck, and tail white; after third year rest of plumage dusky brown, the feathers paler on edges; bill and feet yellow; legs bare of feathers. Immature birds are almost black the first year ("black eagles"); the bases of feathers white; bill black. Second year they are "gray eagles" and are then actually larger than adults. The third year, they come into possession of "bald" heads and white tails.
Range—North America, nesting throughout range.
Season—Permanent resident.

Emblem of the republic, standing for freedom to enjoy life, liberty, and the pursuit of happiness, it must be owned that our national bird is a piratical parasite whenever he gets the chance. With every provision of nature for noble deeds: keenest sight, superb strength, hardihood, fully developed wings, it is seldom that the American eagle obtains a bite to eat in a legitimate way, but almost invariably by stratagem and plunder. Near the sea and other large bodies of water he sits in majesty upon a cliff, or on the naked limb of some tree commanding a wide view, and watches the osprey—a conspicuous sufferer—and other water fowl course patiently over the waves up and down the coast for a fish. Instantly one is caught, down falls the eagle like Jove's thunderbolt from Mount Olympus, and as escape from so overpowering a foe is impossible, the successful fisher quickly drops its prey, while the eagle, dexterously catching it before it touches the water, makes off to his eyrie among the clouds to enjoy it at

leisure. Dead fish cast up on the beach, carrion, sea and shore birds are devoured by this rapacious feeder. Ducks, geese, gulls, and notably coots, that he condescends to catch himself, are favorite morsels when fish fail. It is said wounded ducks suit this unsportsmanlike hunter best. These are picked clean of feathers before the flesh is torn from their bones. In the interior young domestic animals are carried off, but scientists raise their eyebrows at tales of children being borne away by eagles.

When the nesting season approaches, which in the South begins in February and at the far North in May, the eagles may be seen hunting in couples and soaring in great spirals with majestic calm at a dizzy height. As they swoop earthward, the tops of the trees over which they pass sway in the current of air created by the feathered monoplanes. These birds, like most of their class, remain mated throughout their long life, but often quarrel out of the mating season when one encroaches upon the proscribed territory where the other is hunting. Now they are especially noisy: *cac-cac-cac* screams the male, a sound too like a maniac's laugh to be pleasant. The cry of the female is more harsh and broken, sufficiently different for one well up in field practice to tell the sex of the bird by its voice.

A tall pine tree near water is, of all nesting sites, the favorite; next to that a rocky ledge of some bold, inaccessible cliff; but whatever site may be chosen, that forever remains home, a shelter at all seasons, the dearest spot on earth. An immense accumulation of sticks, sod, weeds, corn stalks, hay, pine tops, moss, and other coarse materials make a flat structure four or five feet in breadth and sometimes of even greater height after a succession of

annual repairs. While the two or three large, rough, dull-white eggs are being incubated by both mates, and especially after the young appear, these eagles, unlike the golden species, become truly magnificent in the fierce defence of their treasures; yet a rooster is easily a match for the cowardly eagle at other times. Immense quantities of food must be carried to the helpless young for the three or four months while they remain in the nest, and for weeks after they learn to fly. Immature birds reverse nature's order and are larger than adults, and their plumage undergoes three changes before they appear at the close of the third year in white heads and tails. They may live a century. In whatever phase of plumage, one may know our national bird by its unfeathered legs. It is safe to say any eagle seen in the eastern United States is the bald-head, which name, of course, does not indicate that the bird is actually bald like the vultures, but simply hooded with white feathers.

In the mountainous regions of the western United States, it is the dark, feathered-legged golden eagle with a yellow nape that has furnished the Indians with quills for their warbonnets and much folk lore. And it is of the European golden eagle that Tennyson wrote the lines set to wonderfully descriptive music by McDowell, but equally applicable to our own great bird:

"He clasps the crag with hooked hands;
Close to the sun, in lonely lands,
Ringed with the azure world he stands.
The wrinkled sea beneath him crawls:
He watches from his mountain walls,
And like a thunderbolt he falls."

The Red-shouldered Hawk

Length—Male 18 to 20 inches; female 20 to 22 inches.

Male and Female—Rich dark reddish brown above, the feathers more or less edged with rusty, buff, and whitish; lesser wing coverts rusty red, forming a conspicuous patch on shoulders; four outer feathers of wings notched and all barred with black and white; tail dark with white bars; under parts rusty or buff, the throat streaked with blackish, elsewhere irregularly barred with white. Immature birds plain dark brown above, the wing patch sometimes indicated, sometimes not; head, neck, and under parts pale buff, fully streaked with dark brown; wing and tail quills crossed with many light and dark bars.

Range—Eastern North America from Manitoba and Nova Scotia to the Gulf states and Mexico, westward to Texas and the Great Plains; nests throughout its range.

Season—Permanent resident.

Let any one say "Hawk" to the average farmer and he looks for his gun. For many years it was supposed that every member of the hawk family was a villain and fair game, but the white searchlight of science shows us that most of the tribe are the farmers' allies, which, with the owls, share the task of keeping in check the mice, moles, gophers, snakes, and the larger insect pests. Nature keeps her vast domain patrolled by these vigilant watchers by day and by night. Guns may well be turned on those blood-thirsty fiends in feathers, Cooper's hawk, the sharp-shinned hawk, and the goshawk, that not only eat our

poultry, but every song bird they can catch; the law of the survival of the fittest might well be enforced with lead in their case. But do let us protect our friends, the more heavily built and slow-flying hawks with the red tails and red shoulders, among other allies in our ceaseless war against farm vermin!

In the court of last appeal to which all our hawks are brought—those scientific men in the Department of Agriculture, who examine the contents of birds' stomachs to learn just what food is taken in different parts of the country and at different seasons of the year—the two so-called "hen hawks" were proved to be rare offenders, and great helpers. Two hundred and twenty stomachs of red-shouldered hawks were examined, and only three contained remains of poultry, while one hundred and two contained mice; ninety-two, insects; forty, moles and other small mammals; fifty-nine, frogs and snakes, and so on. The percentage of poultry eaten is so small that it might be reduced to nothing if the farmers would keep their chickens in yards instead of letting them roam to pick up a living in the fields, where the temptation to snatch up one must be overwhelming to a hungry hawk. Fortunately these two beneficent "hen hawks" are still common, in spite of our ignorant persecution of them for two hundred years or more.

Toward the end of summer, especially in September, when nursery duties have ended for the year and the hawks are carefree, you may see them sailing in wide spirals, delighting in the cooler stratum of air high overhead. Balancing on wide, outstretched wings, floating serenely with no apparent effort, they enjoy aeroplaning for the sport's sake.

Sometimes they rise out of sight. *Kee you, kee you,* they scream as they sail. Does the teasing blue jay imitate the call for the fun of frightening little birds?

But the red-shouldered hawk is not on pleasure bent much of the time. Perching is its specialty, and on an outstretched limb, or other point of vantage, it sits erect and dignified, its far-seeing eyes alone in motion trying to sight its quarry—a mouse creeping through the meadow, a mole leaving its tunnel, a chipmunk running along a stone wall, a frog leaping into the swamp, a gopher or young rabbit frisking around the edges of the wood—when, spying one, "like a thunderbolt it falls."

The Red-tailed Hawk

This larger relative of the red-shouldered hawk, more common in the East, shares with it the hatred of all but the most enlightened farmers. Before condemning either of these useful allies, every one should read the report of Dr. Fisher, published by the Government, and to be had for the asking. This expert judge tells of a pair of red-tailed hawks that reared their young for two successive seasons in a birch tree in some swampy woods, about fifty rods from a poultry farm, where they might have helped themselves to eight hundred chickens and half as many ducks; yet they were never known to touch one. Occasionally, in winter especially, when other food is scarce, a red-tail will steal a chicken—probably a maimed or sickly one that cannot get out of the way—or drop on a bob-white; but ninety per cent. of its food consists of injurious mammals and insects.

Both of these slandered "hen hawks" prefer to live in

low, wet, wooded places with open meadows for hunting grounds near by.

The female red-tail measures nearly two feet in length—for "the female of the species" is always larger than the male hawk, just as the squaws in some Indian tribes are larger than the braves. It is said that hawks remain mated for life; so do eagles and owls, for in their family life, at least, the birds of prey are remarkably devoted.

Cooper's Hawk and the Sharp-shinned Hawk

Length—Male 15.5 inches; female 19 inches.

Male, Female, and Young—To be distinguished from the sharp-shinned species only by their larger size, darker, blackish crowns, and rounded, instead of square, tails.

Range—Temperate North America, nesting throughout its United States range; some birds wintering in Mexico and the Southern states.

Season—Permanent resident except at northern limits of range, where it is a summer or transient visitor.

Here is no ally of the farmer, but his foe, the most bold of all his robbers, a bloodthirsty villain that lives by plundering poultry yards, and tearing the warm flesh from the breasts of game and song birds, one of the few members of his generally useful tribe that deserves the punishment ignorantly meted out to his innocent relatives. Unhappily, it is perhaps the most common hawk in the greater part of the United States, and therefore does more harm than all the others. It is mentioned as a bird worth know-

ing only because every one should be able to distinguish foe from friend.

Instead of perching on lookouts, as the red-tailed and red-shouldered hawks do, Cooper's hawk, the big blue darter, and the smaller sharp-shinned hawk or little blue darter dash after their victims on the wing, chasing them across open stretches where such swift, dexterous, dodging flyers are sure to overtake them. Or they will flash out of a clear sky like feathered lightning and boldly strike a chicken, though it be pecking corn near a farmer's feet. These two marauders and the big slate-colored goshawk, also called the blue hen hawk, stab their cruel talons through the vitals of more valuable poultry, song and game birds, than any one would care to read about. These three villains too often escape the charge of shot they so richly deserve.

The female Cooper's hawk is about nineteen inches long and her mate a finger-length smaller, but not nearly so small as the little blue darter, the sharp-shinned hawk, only about a foot in length, but which it very closely resembles in plumage and villainy. Both species have slaty gray upper parts with deep bars across their wings and ashy gray tails. The latter differ in outline, however, Cooper's hawk having a rounded tail with whitish tip, and the sharp-shinned "pigeon hawk" a square tail. In maturity Cooper's hawk wears a blackish crown. Both species have white throats with dark streaks.

Let the guns be turned toward these bloodthirsty, audacious miscreants, and away from the red-tailed and red-shouldered species, beneficient, majestic kings of the air! Longfellow, in "The Birds of Killingworth," among the "Tales of a Wayside Inn," has written a defence of the

SHARP—SHINNED HAWK

MARSH HAWK

hawks, among other birds, that the Audubon societies might well use as a tract.

The Marsh Hawk

Length—Male 19 inches; female 22 inches.

Male—Upper parts gray or bluish ash, washed with brownish; upper tail coverts pure white; silver gray tail feathers with five or six dusky bars, the outer primaries darkest; upper breast pearl gray shading into white underneath, where the plumage is sparsely spotted with rufous.

Female and Young—Upper parts dark amber; the head and neck streaked, other parts margined or spotted with reddish brown; upper tail coverts white; middle tail feathers barred with gray and black, others barred with pale yellow and black. Under parts rusty buff, widely streaked on breast and more narrowly underneath with dusky. The younger the bird the heavier its blackish and rufous coloration, many phases of plumage being shown before emerging into the gray and white adult males.

Range—North America in general; nests throughout range; winters in southern half of it.

Season—Summer resident at northern half of range.

Close along the ground skims the marsh hawk, since field mice and other small mammals, frogs, and the larger insects that hide among the grass are what it is ever seeking as it swerves this way and that, turns, goes over its course, "quartering" the ground like a well-trained dog on

the scent of a hare—the peculiarity of saw-toothed flight that has earned it the hare-hound or harrier's name. A few easy strokes in succession, then a graceful sail on motionless wings, make its flight appear leisurely, even slow and spiritless, as compared with the impetuous dash of a hawk that pursues feathered game; hence this is counted an "ignoble" hawk in the scornful eyes of falconers. Open stretches of country, wide fields, salt and fresh water marshes, ponds, and the banks of small streams, whose sides are not thickly wooded, since trees simply impede this low flier's progress, are its favorite hunting grounds; and it will sometimes alight on a low stump, or in the grass itself, for it is a low percher, too. Because its quarry is humble, and farmers, on the whole, appreciate its service in destroying meadow mice, crickets, grasshoppers, and other pests, this bird suffers comparatively little persecution, and still remains one of the most widely distributed and common of its tribe. It is sometimes known as the harrier, the mouse hawk, or the blue hawk.

Turkey Vulture or Buzzard

Length—30 inches; wing-spread about 6 feet.

Male and Female—Blackish brown; wing coverts and linings grayish; head and neck naked and red, from livid crimson to pale cinnamon, and usually with white specks; base of bill red, and end dead white; feet flesh colored. Head of female covered with grayish brown, fur-like feathers. Young darker than adults; bill and skin of head dark and the latter downy. Nestlings of yellowish white.

Range—Temperate North America, from Atlantic to Pacific, rarely so far north as British Columbia; southward to Patagonia and Falkland Islands. Casual in New England.

Season—Permanent resident, except at extreme northern limit of range.

Floating high in air, with never a perceptible movement of its widespread wings, as it circles with majestic, unimpassioned grace in a great spiral, this common buzzard of our Southern states suggests by its flight the very poetry of motion, while its terrestrial habits of scavenger are surely the very prose of existence. In the air the bird is unsurpassed for grace, as, rising with the wind, with only the slightest motion of its great, flexible, upturned wings, it sails around and around, for hours at a time, at a height of two or three hundred feet; then volplaning in a long sweep, rises again with the same calm, effortless soaring that often carries it beyond our sight through the thin, summer clouds. Usually one may see a dozen great birds amusing themselves by wheeling through space in pursuit of pleasure, and abandoning themselves to the amusement with tireless ecstasy. Is it not probable that so much exercise is taken to help digest the enormous amount of carrion bolted?

Other birds have utilitarian motives for keeping in the air; several of the hawks, for example, do indeed sail about in a similar graceful spiral flight, notably the red-tailed species, but a sudden swoop or dive proves that its slow gyrations were made with an eye directly fastened on a dinner. The crow soars to fight the hawk; the kingbird dashes upward to pursue the crow that carries off its young;

but, amidst the quarrels and cruelties of other birds, the turkey buzzard sails serenely on its way, molested by none, since it attacks none, and makes no enemies, feeding as it does, for the most part, on carrion that none grudge it. The youngest chickens in the barnyard show no alarm when a turkey buzzard alights in their midst. They know that no more harmless creature exists. It is the most common bird in the South, being protected there by law in consideration of its services as scavenger, whereas many tuneful song birds that destroy innumerable insect pests for the farmer are wantonly killed. Every field has its buzzards soaring overhead and casting their shadows, like clouds, on the grain below. Depending on their services, the farmers allow the dead horse, or pig, or chicken to lie where it drops, for the vultures to peck at until the bones are as clean as if purified by an antiseptic. Fresh meat has no attractions for them; their preference is for flesh sufficiently foetid to aid their sight in searching for food, and on such they will gorge until often unable to rise from the ground. When disturbed in the act of overhauling a rubbish heap in the environs of the city, for the bits of garbage that no goat would touch, they express displeasure at a greedy rival by blowing through the nose, making a low, hissing sound or grunt, the only noise they ever utter, and by lifting their wings in a threatening attitude. With both beak and claws capable of inflicting painful injury, the buzzard resorts to the loathsome trick of disgorging the foul contents of its stomach on an intruder. This automatic performance is practised even by the youngest fledglings when disturbed in the nest. It certainly is a most effective protection.

The turkey buzzard shows a decided preference for warm

latitudes, never nesting farther north than New Jersey on the Atlantic Coast, though, strangely enough, the black vulture, with a more southerly range, has also penetrated into the interior as far as British Columbia. Lewis and Clarke met the buzzard about the falls of the Oregon, and it is still not uncommon on the Pacific Slope. Nevertheless, it is about the shambles of towns in the West Indies and other hot countries that the black buzzard or carrion crow finds life the pleasantest. It has the tropical vice of laziness, so closely allied to cowardliness, and lives where there is the least possible necessity for exercising the stronger virtues. Our soldiers in the war with Spain tell of the final touch of horror given to the Cuban battlefields where their wounded and dead comrades fell, by the gruesome black vultures that often were the first to detect a corpse lying unseen among the tall grass.

As night approaches, one buzzard after another flies toward favorite perches in the trees, preferably dead ones, and settles, with much flapping of wings, on the middle branches; then stretching its body and walking along the roost like a turkey, until it arrives at the chosen spot, it hisses or grunts through its nostrils at the next arrival, whose additional weight frequently snaps the dead branch and compels a number of the great birds to repeat the prolonged process of settling to sleep. But, very frequently, buzzards perch like dark spectres on the chimneys of houses, at night, especially in winter, in order to warm their sensitive bodies by the rising smoke, and, after a rain, they often spread their wings over the flues to dry their water-soaked feathers. This spread-eagle attitude is also taken, anywhere the bird happens to be, when the sun comes out after a drenching shower.

Without exerting themselves to form a nest, the buzzards seek out a secluded swamp, palmetto "scrub," sycamore grove, or steep and sunny hillside, and deposit from one to three eggs, usually two, in the cavity of a stump, or lay them directly on the ground, under a bush, or on a rock—anywhere, in fact, that necessity urges. Rotten wood is a favorite receptacle, but the angular bricks of ruined chimneys are not disdained. As a colony of buzzards, when nesting, indulges its offensive defensive action most relentlessly, few, except scientists, care to make a close study of the birds' nesting habits.

CHAPTER XVII

MOURNER, MARTYR, WHISTLER, AND DRUMMER

MOURNING DOVE—PASSENGER PIGEON—BOB-WHITE—RUFFED GROUSE

The Mourning Dove

Length—12 to 13 inches.

Male—Grayish brown or fawn color above, varying to bluish gray. Crown and upper part of head greenish blue, with green and golden metallic reflections on sides of neck. A black spot under each ear. Forehead and breast reddish buff; lighter underneath. Two middle tail feathers longest; all others banded with black and tipped with ashy white. Wing coverts sparsely spotted with black. Flanks and underneath the wings bluish.

Female—Duller and without iridescent reflections on neck.

Range—North America, from Quebec to Panama, and westward to Arizona. Most common in temperate climate, east of Rocky Mountains.

Season—March to November. Common summer resident; not migratory south of Virginia.

No sympathy need be wasted on this incessant love-maker that slowly sings *coo-o-o, ah-coo-o-o-ooo-o-o-ooo-o-o.*

in a sweetly sad voice. Really he is no more melancholy than the plaintive pewee but, on the contrary, is so happy in his love that his devotion has passed into a proverb. Nevertheless, the song sounds more like a dirge than a rapture. While his mate lives, there is no more contented bird.

Dove lovers are quite self-sufficient. Their larger cousins, the wild pigeons, that once were so abundant, depended on friends for much of their happiness and lived in enormous flocks. Now only a few pairs survive in this land of liberty to refute the adage "In union there is strength." Because millions of pigeons slept in favorite roosts many miles in extent, they were all too easily netted, and it did not take greedy men long to turn the last flock into cash. Happily, doves preserved their race by scattering in couples over a wide area—from Panama, in winter, as far north as Ontario in warm weather. Not until nursery duties, which begin early in the spring, are over late in summer, do they give up their shy, unsocial habits to enjoy the company of a few friends. When they rise on whistling wings from tree-bordered fields, where they have been feeding on seeds and grain, not a gun is fired; no one cares to eat them.

Only the cuckoo of our common birds builds so flimsy a nest as the dove's adored darling. She is a slack, incompetent housekeeper, but evidently her lover is blind to every fault. What must the expert phoebe think of such a poorly made, untidy cradle, or that bustling, energetic housewife, Jenny Wren, or the tiniest of clever architects, the humming-bird? It is a wonder that the dove's two white eggs do not fall through the rickety, rimless, unlined lattice. How scarred and bruised the tender, naked bodies of the twins must be by the sticks! Like pigeons,

humming-birds, flickers, and some other feathered parents, doves feed their fledglings by pumping partly digested food —"pigeon's milk"—from their own crops into theirs.

When they leave the open woodlands to take a dust bath in the road, or to walk about and collect gravel for their interior grinding machines, or to get a drink of water before going to sleep, you may have a good look at them. As they walk, they bob their heads in a funny manner of their own. They are bluish, fawn-colored birds about a foot long. The male has some exquisite metallic colors on his neck, otherwise he resembles his best beloved. Beautiful birds these, in spite of their quiet Quaker clothes.

In the Southern states the little ground doves, the smallest of the columbine kin, may be seen by every roadside.

The Passenger Pigeon

Length—16 to 25 inches.

Male—Upper parts bluish slate shaded with olive gray on back and shoulders, and with metallic violet, gold, and greenish reflections on back and sides of head; the wing coverts with velvety black spots; throat bluish slate, quickly shading into a rich reddish buff on breast, and paling into white underneath; two middle tail feathers blackish; others fading from pearl to white. Eyes red, like the feet; bill black.

Female—Similar, but upper parts washed with more olive brown; less iridescence; breast pale grayish brown fading to white underneath.

Range—Eastern North America, nesting chiefly north of or along the northern borders of United States as far west as the Dakotas and Manitoba, and north to Hudsons Bay.

Season—Chiefly a transient visitor in the United States of late years.

The wild pigeon no longer survives to refute the adage, "In union there is strength." No birds have shown greater gregariousness, the flocks once numbering not hundreds nor thousands but millions of birds; Wilson in 1808 mentioning a flock seen by him near Frankfort, Kentucky, which he conservatively estimated at more than two billion, and Audubon told of flights so dense that they darkened the sky, and streamed across it like mighty rivers. So late as our Centennial year one nesting ground in Michigan extended over an area twenty-eight miles in length by three or four in width. The modern mind, accustomed to deal only with pitiful remnants of feathered races, can scarcely grasp the vast numbers that once made our land the sportsman's paradise. Union for once has been fatal. Unlimited netting, even during the entire nesting season, has resulted in sending more than one million pigeons to market from a single roost in one year, leaving perhaps as many more wounded birds and starving, helpless, naked squabs behind, until the poultry stalls became so glutted with pigeons that the low price per barrel scarcely paid for their transportation, and they were fed to the hogs. This abominable practice of netting pigeons, discontinued only because there are no flocks left to capture, drove the birds either to nest north of the United States, or, when within its borders, to change their habits and live in couples chiefly. Captain Bendire, than whom no writer ever expressed an opinion out of fuller knowledge, said in 1892: "The extermination of the passenger pigeon

has progressed so rapidly during the last twenty years that it looks now as if their (*sic*) total extermination might be accomplished within the present century." This prophecy has been only too well fulfilled. The passenger pigeon is to-day as extinct as the great auk.

One or at most two white eggs, laid on a rickety platform of sticks in a tree, where they were visible from below, would scarcely account for the myriads of pigeons once seen, were not frequent nestings common throughout the summer; and it is said the birds laid again on their return South. Both of the devoted mates took regular turns at incubating, the female between two o'clock in the afternoon and nine or ten the next morning, daily, leaving the male only four or five hours sitting, according to Mr. William Brewster. "The males feed twice each day," he says, "namely, from daylight to about eight A. M., and again late in the afternoon. The females feed only in the forenoon. The change is made with great regularity as to time, all the males being on the nest by ten o'clock A. M. . . . The sitting bird does not leave the nest until the bill of its incoming mate nearly touches its tail, the former slipping off as the latter takes its place. . . . Five weeks are consumed by a single nesting. . . . Usually the male pushes the young off the nest by force. The latter struggles and squeals precisely like a tame squab, but is finally crowded out along the branch, and after further feeble resistance flutters down to the ground. Three or four days elapse before it is able to fly well. Upon leaving the nest it is often fatter and heavier than the old birds; but it quickly becomes thinner and lighter, despite the enormous quantity of food it consumes." Before leaving the nest it was nourished with food brought

up from the parents' crops, where, mixed with a peculiar whitish fluid, it passed among the credulous as "pigeon's milk." Is not this the nearest approach among birds to the mammals' method of feeding their young? Patterns of all domestic virtues, proverbially loving, gentle birds, anatomists tell us their blandness was due not to the cultivation of their moral nature, but to the absence of the gall-bladder!

Bob-white or Quail

Length—9.5 to 10.5 inches.

Male and Female—Upper parts chestnut brown flecked with black, white, and tawny; rump grayish brown, finely mottled, and with a few streaks of blackish; tail ashy, the inner feathers mottled with buff; front of crown, a line from bill beneath the eye, and band on upper breast, black; forehead and stripe over the eye, extending down the side of the neck, white; breast and under parts white or buff, crossed with irregular narrow black lines; feathers on sides and flanks chestnut, with white edges barred with black. The female has forehead, line over the eye, and throat, buff, and little or no black on upper breast. Summer birds have blacker crowns and paler buff markings.

Range—"Eastern United States and southern Ontario, from southern Maine to the South Atlantic and Gulf states; west to central South Dakota, Nebraska, Kansas, Oklahoma, and eastern Texas. Of late years has gradually extended its range westward along lines of railroad and settlements; also introduced at various points in

Colorado, New Mexico, Utah, Idaho, California, Oregon, and Washington. Breeds throughout its range."
Season—Permanent resident.

What a cheerful contrast is bob-white's clear, staccato whistle to the drawling coo of the amorous dove! Character is as often expressed in a bird's voice as in a human's. From their voices alone you might guess that the dove and the quail are no relation. They do not belong even to the same order, bob-white being a scratching bird and having the ruffed grouse and barnyard chicken for his kin. Pheasants and turkeys are distantly related. In the South people call him a partridge; in New England it is the ruffed grouse that is known by that name; therefore, to save confusion, why not always give bob-white the name by which he calls himself? The chickadee, phoebe, peewee, towhee, whippoorwill, bobolink, and kill-deer who tell their names less plainly than he, save every one who tries to know them much trouble. *Bob-white! Ah, bob-white!* rings from some plump little feathered gallant on the outskirts of almost any farm during the long nesting season.

A slight depression in some dry, grassy field or a hole at the foot of an old stump or weed-hedged wall will be lined with leaves and grasses by both mates in May to receive from ten to eighteen brilliant white eggs that are packed in, pointed end downward, to economize space. If an egg were removed, it would be difficult indeed to rearrange the clutch with such economy. Would it not be cruel to touch a nest which the outraged owners would at once desert?

Just as little chickens follow the old hen about, so downy bob-whites run after both their parents and learn which seeds, grain, insects, and berries they may safely eat. Man, with his gun and dog and mowing machines, is their worst enemy, of course; then come the sly fox and sneaking weasel that spring upon them from ambush, and the hawk that drops upon them like a thunderbolt. Birds have enemies above, below, and on every side. Is it any wonder that they are timid and shy? A note of alarm summons the chicks, half-running, half-flying, to huddle close to their mother or to take shelter beneath her short wings. When she is busy sitting on a second or third clutch of eggs, it is Bob himself, a pattern of all the domestic virtues, who takes full charge of the family. When the last chicks are ready to join their older brothers and sisters, the bevy may contain three or four dozen birds. At bedtime they squat in a circle on the ground, tails toward the centre of the ring, heads pointing outward to detect an enemy coming from any direction. As if their vigilance were not enough, Bob usually remains outside the ring to act as sentinel. At the sign of danger the bunch of birds will rise with loud whirring of the wings, as suddenly as a bomb might burst.

The *whir-r-r-r-r-r-r*, indicates something of the speed at which the bob-whites rush through the air. Rising at a considerable angle from the ground, on stiff, set, short wings, the birds, heading for a wooded cover, are off in a strung-out line that only the tyro imagines makes an easy target. Suddenly dropping all at once and not far from each other, squatting close, in the confidence inspired by the perfect mimicry of their plumage with their surroundings, each bird must be almost trodden upon before it will rise to

wing. Very rarely they take refuge in trees. It has been said a bob-white can retain its odor voluntarily, since the best of pointers often fails to find it even when within a few feet. When lying close, the wings are pressed against the side, every feather clings tightly with a tension produced by fear. The result is that by flying upward, rather than running and giving the scent to the dogs, and by compressing its feathers on dropping to the ground again, brave little bob-white often gives the sportsman a lively chase for his game. After much shooting, birds become "educated." Wonderfully clever they are in matching the sportsman's tricks with better ones. They school the wing shots finely until the crack marksman confesses his chagrin. The best-trained dog may bushwhack an entire slope, where they are known to be scattered, without flushing one; for vainly does the dog draw now. His usefulness was greatest in standing a covey before the reports from the gun gave fair warning that no one-sided sport had begun.

Who that knows its charm, to say nothing of its economic value, cares to eat this friendly little song bird that stays about the farm with his family through the coldest winter to pick up the buckwheat, cheap raisins, and sweepings from the hay loft that keep him as neighborly as a robin? Every farmer who shoots or allows others to destroy this useful ally in his eternal war against weeds and insect pests, impoverishes himself more than he is aware.

Ruffed Grouse

Length—16 to 18 inches.

Male and Female—Upper parts chestnut varied with grayish and yellowish brown, white, and black; head slightly

crested; yellow line over eye; sides of neck of male with large tufts of glossy greenish black feathers tipped with light brown, much restricted or wanting and dull in female; long tail, which may be spread fan-like, yellowish brown or gray or rusty, beautifully and finely barred with irregular bands half buff, half black; a broad subterminal band of black between gray bands; throat and breast buff, the former unmarked; underneath whitish, all barred with brown, strongly on sides, less distinctly on breast and below; legs feathered.

Range—Eastern United States and southern Canada west to Minnesota, south to northern Georgia, Mississippi, and Arkansas.

Season—Permanent but roving resident.

Neither a "partridge" nor a "pheasant," it is by the former name that this superb game bird is best known to the New Englanders, and by the latter that it is commonly called in the Middle and Southern states; but this most typical grouse appears in literature and the market stalls alike as a "partridge," a misnomer (shared by the bob-white) which strictly belongs to a race of European birds of which we have no counterparts on this side of the Atlantic.

Partial to hill country interspersed with cultivated meadows and dingles, or to mountains, rocky, inaccessible, thickly timbered, and well watered with bush-grown streams, it is only rarely, and then chiefly in autumn, that coveys leave high altitudes to feed along the edges of milder valleys. The dainties preferred include crickets, grasshoppers, caterpillars, beechnuts, chestnuts, acorns of the

MOURNING DOVE

BOB–WHITE (Male left—Female right)

chestnut oak and the white oak, strawberries, blueberries, raspberries, elderberries, wintergreen and partridge berries with their foliage, cranberries, the bright fruit of the black alder and dogwood, sumach berries (including the poisonous varieties, which do the grouse no injury), wild grapes, grain dropped in the stubble of harvested fields, the foliage of many plants, and the leaf buds of numerous shrubs and trees—a varied menu, indeed, responsible alike for the bird's luscious, tender flesh and its roving disposition.

Bob-white and ruffed grouse are the fife and drum corps of the woods. That some birds are wonderful musicians everybody knows, and only the bird orchestra contains a member who can drum without a drum. Even that famous drummer, the woodpecker, needs a dead, dry, resonant, hardwood limb to tap on before he can produce his best effects. How does the grouse beat his deep, muffled, thump, thump, thumping, rolling tattoo? Some scientists have staked their reputation on the claim that they have seen him drum by rapidly striking his wings against the sides of his body; but other later-day scientists, who contend that he beats only the air when his wings vibrate so fast that the sight cannot quite follow them, are undoubtedly right.

On a fallen log, a stump, a rail fence or a wall, that may have been used as a drumming stand for many years, the male grouse will strut with a jerking, dandified gait, puff out his feathers, ruff his neck frills, raise and spread his fan-shaped tail like a turkey cock, blow out his cheeks and neck, then suddenly halt and begin to beat his wings. After a few slow, measured thumps, the stiff, strong wings whir faster and faster, until there is only a blur where they vibrate. This is the grouse's love song that summons a

mate to their trysting place. It serves also as a challenge to a rival. Blood and feathers may soon be strewn around the ground, for in the spring grouse will fight as fiercely as game-cocks. Sportsmen in the autumn woods often hear grouse drumming at the old stand, merely from excess of vigor and not because they take the slightest interest then in a mate. After the mating season is over, they have no more chivalry than barnyard roosters.

Perhaps you know what it is to be suddenly startled by the loud whirring roar of a big brown grouse that suddenly hurls itself from the ground near your feet. If it were shot from the mouth of a cannon it could surprise you no less. Then it sails away, dodging the trees, and disappears. Gunners have "educated" the intelligent bird into being, perhaps, the most wily, difficult game in the woods.

Like the meadow-lark, flicker, sparrows, and other birds that spend much time on the ground, the bob-white and ruffed grouse wear brown feathers, streaked and barred, to harmonize perfectly with their surroundings. "To find a hen grouse with young is a memorable experience," says Frank M. Chapman. "While the parent is giving us a lesson in mother love and bird intelligence, her downy chicks are teaching us facts in protective coloration and heredity. How the old one limps and flutters! She can barely drag herself along the ground. But while we are watching her, what has become of the ten or a dozen little yellow balls we had almost stepped on? Not a feather do we see, until, poking about in the leaves, we find one little chap hiding here and another squatting there, all perfectly still, and so like the leaves in color as to be nearly invisible."

CHAPTER XVIII

BIRDS OF THE SHORE AND MARSHES

Killdeer—Semipalmated or Ring-necked Plover—Least Sandpiper—Spotted Sandpiper—Woodcock and Wilson's Snipe—Sora and Clapper Rails—Coot—Great Blue Heron—Little Green Heron—Bittern

The Killdeer

Length—9.5 to 10.5 inches. About the size of the robin.

Male and Female—Grayish brown washed with olive above; the forehead, spot behind eyes, throat, a ring around the neck, a patch on wing, a band across breast, and underneath, white; front of crown, cheeks, a ring around neck, and a band across breast, black; lower back and base of tail, chestnut; inner tail feathers like upper parts; outer feathers chestnut and white all with subterminal band of black tipped with white. Bill black; legs light; eyelids red.

Range—Temperate North America to Newfoundland and Manitoba; nests throughout range; winters usually south of New England to Bermuda, the West Indies, Central and South America.

Season—Resident, March to November, or later; most abundant in spring and autumn migrations.

If you don't know the little killdeer plover, it is surely not his fault, for he is a noisy sentinel, always ready, night or day, to tell you his name. *Kildee, kildee,* he calls with his high voice when alarmed—and he is usually beset by fears, real or imaginary—but when at peace, his voice is sweet and low. Much persecution from gunners has made the naturally gentle birds of the shore and marshes rather shy and wild. Most plovers nest in the arctic regions, where man and his wicked ways are unknown. When the young birds reach our land of liberty, and receive a welcome of hot shot, the survivors learn their first lesson in shyness. Some killdeer, however, are hatched in the United States. No sportsman worthy of the name would waste shot on a bird not larger than a robin; one, moreover, with musky flesh; yet I have seen scores of killdeer strung over the backs of gunners in tide-water Virginia. Their larger cousins, the black-breasted, the piping, the golden and Wilson's plovers, who travel from the tundras of the far North to South America and back again every year, have now become rare because too much cooked along their long route. You can usually tell a flock of plovers in flight by the crescent shape of the rapidly moving mass.

With a busy company of friends, the killdeer haunts broad tracts of grassy land, near water, uplands or lowlands, or marshy meadows beside the sea. Scattered over a chosen feeding ground, the plovers run about nimbly, quickly, daintily, nervously, looking for trouble as well as food. Because worms, which are their favorite supper, come out of the ground at nightfall, the birds are especially active then. Grasshoppers, crickets, and other insects content them during the day.

RUFFED GROUSE (Male left—Female right)

SORA

Semipalmated or Ring-necked Plover

The killdeer, which is our commonest plover, has a little cousin scarcely larger than an English sparrow that is a miniature of himself, except that the semipalmated (half-webbed) or ring-necked plover has only one dark band across the upper part of his white breast, while the killdeer wears two black rings. This dainty little beach bird has brownish gray upper parts so like the color of wet sand, that, as he runs along over it, just in advance of the frothing ripples, he is in perfect harmony with his surroundings. Relying upon that fact for protection, he will squat behind a tuft of beach grass if you pass too near rather than risk flight.

When the tide is out, you may see the tiny forms of these common ring-necks mingled with the ever-friendly little sandpipers on the exposed sand bars and wide beaches where all keep up a constant hunt for bits of shell fish, fish eggs, and sand worms. Birds that have been hiding in the marshes and sand dunes now trip a light measure over the exposed sand bars and mud flats, leaving little tracks that may not be distinguished from those of the sand ox-eye or semipalmated sandpiper that hunts with them, although the plover has only three half-webbed toes. The small, slightly elevated fourth toe of the ox-eye is only faintly evident at times in its tracks.

Tiny forms chase out after the receding waves, running in just in advance of the frothing ripples that do not quite overtake them, although the plovers almost never spring to wing as sandpipers do when a drenching threatens, but place all their trust in their fleet legs. With such feet as

theirs, they must be able to swim; but who ever sees them in deep water? They merely ride on an incoming wave when it overtakes them, and are washed ashore.

General Greely found them nesting in Grinnell Land in July, the males doing most of the incubating as is customary in the plover family, whose females certainly have advanced ideas. Downy little chicks run about as soon after leaving the egg as they are dry. In August the advance guard of southbound flocks begin to arrive in the United States from the Arctic Circle *en route* for Brazil—quite a journey in the world to test the fledglings' wings.

The Least Sandpiper

The least sandpipers, peeps, ox-eyes or stints, as they are variously called, are only about the size of sparrows—too small for any self-respecting gunner to bag, therefore they are still abundant. Their light, dingy-brown and gray, finely speckled backs are about the color of the mottled sand they run over so nimbly, and their breasts are as white as the froth of the waves that almost never touch them. Beach birds become marvellously quick in reckoning the fraction of a second when they must run from under the combing wave about to break over their little heads. Plovers rely on their fleet feet to escape a wetting. Least sandpipers usually fly upward and onward if a deluge threatens; but they have a similar cousin, the semipalmated (half-webbed) sandpiper that swims well when the unexpected water suddenly lifts it off its feet.

These busy, cheerful, sprightly little peepers are always ready to welcome to their flocks other birds—ring-necked plovers, turnstones, snipe, and phalaropes. If by no other

sign, you may distinguish sandpipers by their constant call, *peep-peep*.

> Across the narrow beach we flit,
> One little sandpiper and I;
> And fast I gather, bit by bit,
> The scattered driftwood bleached and dry.
> The wild waves reach their hands for it,
> The wild wind raves, the tide runs high,
> As up and down the beach we flit—
> One little sandpiper and I.

Almost every one is more familiar with Celia Thaxter's poem about the little sandpiper than with the bird itself. But if you have the good fortune to be at the seashore in the late summer, when flocks of the friendly mites come to visit us from the arctic regions on their way south, you can scarcely fail to become acquainted with the companion of Mrs. Thaxter's lonely walks along the beach at the Isles of Shoals where her father kept the lighthouse.

The Spotted Sandpiper

Length—7.5 inches. A trifle larger than the English sparrow.

Male and Female—Upper parts an olive ashen color, spotted and streaked with black; line over eye and under parts white, the latter plentifully spotted with round black dots large and small, but larger and closer on the male than on the female, the smallest marks on throat; inner tail feathers like the back, the outer ones with blackish bars; secondaries and their coverts broadly tipped with white; some white feathers at bend of wing; white wing lining with dusky bar; other white feathers

concealed in folded wing, but conspicuous in flight. Winter birds are duller and browner and without bars on upper parts.

Range—North America to Hudsons Bay, nesting throughout its range; winters in Southern states and southward to Brazil.

Season—Summer resident; April to September or October.

Do you know the spotted sandpiper, teeter, tilt-up, teeter-tail, teeter-snipe, or tip-up, the familiar little spotted sandpiper of ditches and pools, roadside and woodland streams, river shores, creeks, swamps, and wet meadows—of the sea beaches, too, during the migrations? Quite as frequently it goes to dry uplands, wooded slopes, and mountains as high as the timber line, as if undecided whether to be a shore or a land bird, a wader or a songster. Charming to the eye and ear alike, what possible attraction can a half dozen of these pathetically small bodies, roasted and served on a skewer, have to a hungry man when beefsteak may be obtained? A thrush is larger and scarcely more tuneful, yet numbers of these little sandpipers are shot annually.

Some quaint and ridiculous mannerisms, recorded in a large list of popular names, make this a particularly interesting bird to watch. Alighting after a short, low flight, it first stands still, like a willet, to look about; then making a deep bow to the spectator, you might feel complimented by the obeisance, did not the elevation of the rear extremity turned toward you the next minute imply a withering contempt. Bowing first toward you, then from you, the teeter deliberately sea-saws east, west, north, south. This absurd performance, frequently and ever solemnly

indulged in, interrupts many a meal and run along the beach. A sudden jerking up or jetting of the tail as the bird walks, gives it a most curious gait, all the more amusing because the bird is so small and evidently so self-satisfied. One rarely sees more than a pair of these sandpipers in a neighborhood which they somehow preëmpt, except at the migrations, when families travel together; but as two broods are generally raised in a summer, these family parties are no mean sized flock. Startle a "teetersnipe" and with a sharp, sweet *peet-weet, weet-weet*, it flies off swiftly on a curve, in a steady, low course, but with none of the erratic zig-zags characteristic of a true snipe's motions, and soon alights not far from where it set out. A fence rail, a tree, or even the roofs of outbuildings on the farm have been chosen as resting places. The peet-weets skim above the waving grain inland, their pendent, pointed wings beating steadily, and follow the same graceful curves that mark their course above the sea.

In the nesting season, which practically extends all through the summer, this is a sand "lark" indeed. Soaring upward, singing as he goes, in that angelic manner of the true lark of England, the male pours out his happiness in low, sweet *peet-weets* trilled rapidly and prolonged into a song—cheerful, even ecstatic notes, without a trace of the plaintive tone heard at other times. A good deal of music passes back and forth from these birds awing.

Fluffy little chicks run from the creamy buff shells thickly spotted and speckled with brown, as soon as hatched. The nest, or a depression in the ground, lined with dry grass, that answers every purpose, may be in a meadow or orchard, but rarely far from water that attracts worms, snails, and insects for the little family to feed on. This is

the one sandpiper that we may confidently expect to meet throughout the summer.

The Woodcock

Length—10 to 11 inches; female 11 to 12 inches.
Male and Female—Upper parts varied with gray, brown, black, and buff, an indistinct black line on front of head, another running from bill to eye; back of head black with three buff bars. Under parts reddish buff brown. Eyes large and placed in upper corner of triangular head. Bill long, straight, stout. Short, thick neck and compact, rounded body; wings and legs short.
Range—Eastern North America, from the British provinces to the Gulf, nesting nearly throughout its range; winters south of Virginia and southern Illinois.
Season—Resident all but the coldest months; a few winter.

The borings of the woodcock in bogs, wet woodlands, and fields—little groups of clean-cut holes made by the bird's bill in the soft earth—give the surest clue to the presence of this game bird, that has been tracked by sportsmen and pot hunters alike, from Labrador to the Gulf, by means of these tell-tale marks until the day cannot be far distant when there will be no woodcock left to shoot. Since earthworms are the bird's staple diet, these must be probed for and felt after through the moist earth. Down goes the woodcock's bill, sunk to the nostril; the upper half, being flexible at the tip, draws the worm forth as one might raise a string through the neck of a jar with one's finger. Curiously, the tip of the upper mandible works quite independently of the lower one—a fact only recently dis-

covered. Owing to the position of the eyes, at the back of the head, food must be felt rather than seen; but, so sensitive is the tip of the bill, and so far out of sight are the worms, in any case, the eyes serve a better purpose in being placed where they widen the bird's vision and so detect an enemy afar. It is claimed by some that, like the owls, woodcock see best at night. Worms come to the surface after dark, which explains this and many other birds' nocturnal habits.

In the early spring any one who takes an interest in the woodcock, aside from its flavor, will be repaid for one's tramp through the swale, at evening, to see the bird go through a series of aërial antics and attestations of affection to his *innamorata*. Standing with his bill pointing downward and his body inclined forward, he calls out *pink, pink*, as much as to say: "Now look, the performance is about to begin"; then suddenly he springs from the ground, flies around in circles, his short stiff wings whistling as he goes higher, higher, faster, faster, and louder and louder, as he sweeps by overhead in erratic circles, each overlapping the other, until the end of the spiral described must be fully three hundred feet from the ground. Now, uttering a sharp whistle, down he comes, pitching, darting, and finally alighting very near the spot from which he set out. *Pink, pink*, he again calls, to make sure his efforts are not lost upon the object of his affection, and before he can fairly have recovered his breath, off he goes on another series of gyrations accompanied by wing music. Or, he may dance jigs when in the actual presence of the loved one. Cranes, plovers, owls, and flickers, among others, go through clownish performances to win their mates, but the woodhen remains coy and apparently coldly indifferent to the

madness of her lover. He will sometimes stand motionless, as if meditating on some new method of winning her, his head drawn in, his bill pressing against his breast. Then, with his short tail raised and outstretched like a grouse's, and with wings trailing beside him, he will strut about with a high step—a comical picture of dignity and importance.

Little time need be taken from the honeymoon to make a nest. This consists of a few dry leaves on the ground in the woods, usually near a stump, where the eggs are laid, often before the snow has melted, in April. The mimicry of plumage which so closely resembles the woodland floor is remarkable. One can scarcely see a sitting bird, even when quite near her. A dry place being chosen for the nesting site, it sometimes becomes necessary to transport the funny little fluffy, long-billed chicks to muddy hunting grounds, and the mother has been detected in the act of flying with one of her brood held between her thighs. But the chicks are by no means helpless, even from the instant they leave the shell. It is a pretty sight to see a little family poking about at twilight for larvae, worms, and small insects, among the decayed leaves, the fallen logs, and the ferns and skunk cabbages. *Peep, peep,* they call, quite like barnyard chicks.

By the first of August the woodcocks, deserting the low, wet lands, scatter themselves over the country in cornfields, grassy meadows, birch-covered hillsides, "alder runs," pine forests, and thick, cool, moist undergrowth; and now they moult. No whistling of wings can be heard as the birds heavily labor along near the ground, often unable to raise their denuded bodies higher. In September, when the sportsmen make sad havoc in the flocks, already

SNOWY EGRET

blunt behind where their queer little short-pointed tails stand up, the rails' small figures thread their way in and out of the mazes over the oozy ground with wonderful rapidity.

Food gathered from the surface of the ground is picked off with sharp pecks, but all the rails run up the rushes also, clinging with the help of their hind toes to the swaying stem within reach of the grain hanging in tassels at the top. The long front toes, flattened but scarcely lobed, enable them to tread out a dinner from the mud as well as to swim across a ditch or inlet. All the rails are good divers. Rather than expose themselves as a target for the gunner, they will cling to submerged stalks, with their bills only above water, and allow a skiff to pass over them, without stirring.

It is always the sportsman's hope to flush the rails, whose strong legs and skulking habits sufficiently protect them in the sedges, but whose slow, short flight keeps them within range of the veriest tyro. The 'prentice hand is tried on rails. Trailing their legs after them, and feebly fluttering their wings as they rise just above the tops of the rushes, they soon drop down into them again as if exhausted; yet some of these are the very birds that migrate from the West Indies to Hudson Bay. Their flight is by no means so feeble as it appears.

The Sora, or Carolina, Rail

Length—8 to 9.5 inches. A little smaller than a robin.

Male and Female—Above, olive brown varied with black and gray; front of head, stripe on crown, and line on throat, black; side of head and breast ashy gray or slate;

sides of breast spotted with white; flanks barred slate and white; white underneath. Immature birds have brown breast, no black on head, and a white throat.

Range—Temperate North America; more abundant on the Atlantic than the Pacific Slope. Nests from Kansas, Illinois, and New York northward to Hudsons Bay; winters from our Southern states to West Indies and northern South America.

Season—Common summer resident at the north; winter resident south of North Carolina; sometimes in sheltered marshes farther north.

Where flocks of bobolinks (transformed by a heavy moult into the streaked brown reed birds of the South) congregate to feed upon the wild rice or oats in early autumn, sportsmen bag the soras by tens of thousands annually, both of these misnamed "ortolans" coming into market in September and October, by which time the sora's pitifully small, thin body has acquired the only fat it ever boasts. "As thin as a rail" at every other season, however, is a most significant expression to the cook who plucks a dozen or more for a dinner party. Yet many people think it is a fence rail that the adage refers to. Offering the epicure even a smaller bite than a robin, they serve to add to a banquet another course of culinary bric-a-brac in lieu of nourishment.

The sora may be heard wherever wild rice grows along inland lakes and rivers or in other marshes along the coast. Its sweetly whistled spring song *ker-wee, ker-wee,* and "rolling whinny" give place in autumn to the *'kuk, kuk*

'k-'k-'k-'kuk imitated by alleged sportsmen in search of a mere trifle of flesh that they fill with shot.

THE CLAPPER RAIL

Salt marshes, mangrove swamps, and grassy fields along the seacoast contain more of these little gray skulkers than the keenest eye suspects; and were it not for their incessant chattering, who would ever know they had come up from the South to spend the summer? At the nesting season there can be no noisier birds anywhere than these; the marshes echo with their long, rolling cackle like a mechanical toy, that is taken up and repeated by each member of the community, until the chorus attracts every gunner to the place. Immense numbers of the compressed, thin bodies, that often measure no more than an inch and a quarter through the breast, find their way to the city markets from the New Jersey salt meadows, after they have taken on a little fat in the wild grain fields in autumn. Yet this is sometimes called the big rail, measuring, as it does, about a foot in length.

The Coot

Length—14 to 16 inches.

Male and Female—General color slate; very dark on head and neck, lighter on under parts; edge of wing, tips of secondaries, and space below tail, white. Bill ivory white; two brownish spots near tip, the same shade as the horny plate on front of head a characteristic mark. Legs and feet pale green, the latter with scalloped lobes.

Range—North America at large, from Greenland and

SHOVELER (Male left—Female right in water)

R.E.

Alaska to the West Indies and Central America; nesting throughout range, but more rarely on Atlantic coast.

Season—Resident in the South; chiefly a spring and autumn migrant at the North, April, May; September to November.

More aquatic than the rails, the coot delights in the swimming and diving feats of a duck, owing to its lobed toes. What these toes lack in width is amply made up in length, the fact that makes the bird so expert in the water and correspondingly awkward when it runs over the land, where, however, it spends very little time.

A lake or quiet river surrounded by large marshy tracts where sluggish streams meander, bringing down into deeper water wild grain and seeds, the larvae of insects, fish spawn, snails, worms, and vegetable matter, makes the ideal home of this duck-like bird. "I come from the haunts of coot and hern," the song of Tennyson's brook, calls up a picture of the home that needs no enlarging. The coot dives for food to great depths, sometimes sinking duck fashion, and disappearing to parts unknown by a long swim under water with the help of both wings and feet. Swimming on the surface, the bird has a funny habit of bobbing its head in unison with the strokes given in the stern by its twin screws.

A large amount of gravel seems necessary to help digest the quantity of grain swallowed, and for this a flock of coots must sometimes leave the muddy region of the lake. Rising from the surface, they flutter just above it, pattering along for a distance, their distended feet striking the water constantly, until sufficient momentum is gained to spring into the air and trust to wing power alone. This

pattering noise and splashing, often heard when the coots cannot be seen for the tall sedges that screen them, is characteristic of ducks also.

In southern waters, at least, coots and ducks often resort to the same lakes. At no time of the year silent birds, often incessant chatterers, it is during the nesting season that the coots break out into shrill, high-pitched, noisy cacklings, which the slightest disturbance calls forth. Jealous, unwilling to permit alien swimmers in their neighborhood, sociable, but without any great love of kin or kind to mellow their dispositions or their voices, they make their neighborhood lively. But coots are shy of men, albeit the young and old alike have flesh no one not starving could eat, although eagles and some hawks seem to relish them, and they usually live in some inaccessible pond or swamp, especially at the nesting season. As night approaches, they lose much of the timidity which keeps them concealed and silent the greater part of the day.

Throughout their wide range the coot is variously known like the rail as mud hen, also as blue Peter, and moor hen.

The Great Blue Heron

Length—42 to 50 inches. Stands about 4 feet high.

Male and Female—Crown and throat white, with a long black crest beginning at base of bill, running through eye, and hanging over the neck, the two longest nuptial feathers of which are lacking in autumn. Very long neck, light brownish gray, the whitish feathers on lower neck much lengthened and hanging over the dusky and chestnut breast. Upper parts ashy blue; darker on

wings, which are ornamented with long plumes, similar to those on breast, in nesting plumage only. Bend of wing and thighs rusty red. Under parts dusky, tipped with white and rufous. Long legs and feet, black. Bill, longer than head, stout, sharp, and yellow.

Range—North America at large, from Labrador, Hudson Bay, and Alaska; nesting locally through range, and wintering in our Southern states, the West Indies, and Central and South America.

Season—Summer resident at the north, April to October, often to December; elsewhere resident all the year.

The Japanese artists, "on many a screen and jar, on many a plaque and fan," have taught some of us the aesthetic value of the heron and its allies—birds whose outstretched necks, long, dangling legs, slender bodies, and broad expanse of wing give a picturesque animation to our own marshes.

Standing motionless as the sphinx, with his neck drawn in until his crested head rests between his angular shoulders, the big, long-legged, misty-blue heron depends upon his stillness and protective coloring to escape the notice of his prey, and of his human foes (for he has no others). In spite of his size it takes the sharpest eyes to detect him as he waits in some shallow pool among the sedges along the creek or river side, silently, solemnly, hour after hour, for a little fish, frog, lizard, snake, or some large insect to come within striking distance. With a sudden stroke of his long, strong, sharp bill, he either snaps up his victim, or runs it through. A fish will be tossed in the air before being swallowed, head downward, that the fins may not scratch his very long, slender throat.

Disturb him, and with a harsh rasping *squawk* he spreads his long wings, flaps them softly and solemnly, and slowly flies deeper into the marsh. At close range he looks a comical mass of angles; but as he soars away and circles majestically above, his great shadow moving over the marsh like a cloud, no bird but the eagle is so impressive and even it is not so picturesque.

Herons are by no means hermits always. Colonies of ten or fifteen pairs return year after year at the nesting season to ancestral rookeries, each couple simply relining with fresh twigs the platform of sticks in a tree-top that has served a previous brood or generation as a nest. The three or four dull bluish green eggs that are a little larger than a hen's very rarely tumble out of the rickety lattice, however. Both the crudeness of the nest and the elliptical form of the egg indicate, among other signs, that the heron is one of the low forms of bird life, not far removed from the reptiles, as scientists reckon eons of time. Sometimes nests are found directly on the ground or on the tops of rocks; but even then the fledglings, that sit on their haunches in a state of helplessness, make no attempt to run about for two or three weeks.

Only a generation ago the snowy heron or egret was so abundant the southern marshes fairly glistened with flocks, as if piled with snow; but all the trace of this exquisite bird now left is in the aigrettes that, once worn as its wedding dress, to-day wave above the unthinking brows of foolish women. In some states there is a penalty attached to the shooting of this heron; but the plume hunters evade the law by cutting the flesh containing the aigrettes from the back of the living bird, that is left to die in agony. Countless thousands of the particularly helpless fledglings,

suddenly orphaned, have slowly starved to death, and so rapidly hastened the day when the extinction of the species must end the sinful folly.

The Little Green Heron

This most abundant member of his tropical tribe that spends the summer with us, is a shy, solitary bird of the swamps where you would lose your rubber boots in the quagmire if you attempted to know him too intimately. But you may catch a glimpse of him as he wades about the edge of a pond or creek with slow, calculated steps, looking for his supper. All herons become more active toward evening because their prey does. By day, this heron, like his big, blue cousin, might be mistaken for a stump or snag among the sedges and bushes by the waterside, so dark and still is he. Herons are accused of the tropical vice of laziness; but surely a bird that travels from northern Canada to the tropics and back again every year to earn its living as the little green heron does, is not altogether lazy. Startle him, and he springs into the air with a loud *squawk*, flapping his broad wings and trailing his greenish-yellow legs behind him stork fashion.

He and his mate have long, dark-green crests on their odd-shaped, receding heads and some lengthened, pointed feathers between the shoulders of their green or grayish-green hunched backs. The reddish chestnut color on their necks fades into the brownish ash of their under parts, divided by a line of dark spots on the white throat that widen on the breast. Although the little green heron is the smallest member of this tribe of large birds that we

see in the Northern states and Canada, it is about a foot and a half long, larger than any bird, except one of its own cousins, that you are likely to see in its marshy haunts.

Unlike many of their kind a pair of these herons prefer to build their rickety nests apart, rather than in one of those large, sociable, noisy, and noisome colonies which we associate with the heron tribe. Flocking is often a fatal custom.

Almost the last snowy heron and white egret, that formerly lived in large colonies, had yielded their bodies to the knife of the plume hunter before the law protected them. Inasmuch as all young herons depended upon their parents through an unusually long, helpless infancy, the little orphans were left to die by starvation, that the unthinking heads of vain women might be decked out with aigrettes! Don't blame the poor hunters too much when the plumes were worth their weight in gold. Now, thanks to the activity of the Audubon Societies, not a woman in America dares wear an aigrette nor a bird-of-paradise plume.

The Bittern

Length—Varies from 24 to 34 inches.

Male and Female—Subcrested; upper parts freckled with shades of brown, blackish, buff, and whitish; top of head and back of neck slate color, with a yellow brown wash; a black streak on sides of neck; chin and throat white, with a few brown streaks; under parts pale buff, striped with brown; head flat. Bill yellow, rather stout, and sharply pointed; tail small and rounded; legs long and olive colored.

Range—Temperate North America; nests usually north of Virginia, and winters from that state southward to the West Indies.

Season—Summer resident, or visitor from May to October; permanent in the South.

Even if you have never seen this shy hermit of large swamps and marshy meadows you must know him by his remarkable "barbaric yawp." Not a muscle does this brown and blackish and buff freckled fellow move as he stands waiting for prey to come within striking distance of what appears to be a dead stump. On closer examination he looks as if he might be carved out of tortoise shell. Sometimes he stands with his head drawn in until it rests on his back; or, he may hold his head erect and pointed upward when he looks like a sharp snag. While he meditates pleasantly on the flavor of a coming dinner, he suddenly snaps and gulps, filling his lungs with air, then loudly bellows forth the most unmusical bird cry you are ever likely to hear. You may recognize it across the marsh half a mile away or more. A nauseated child would go through no more convulsive gestures than this happy hermit makes every time he lifts up his voice to call, *pump-er-lunk, pump-er-lunk, pump-er-lunk.* Still another noise has earned him one of his many popular names, the stake driver, because it sounds like a stick being driven into the mud.

A booming bittern will stand hour after hour, almost every day in summer, year after year, on a dark, decaying pile of an old dock or at the edge of the reeds. Relying on his protective coloring and poses for concealment in so exposed a place, he profits by his fearlessness in broad day-

light next to an excellent feeding ground. At low tide he walks about sedately on the muddy flats treading out a dinner. Kingfishers rattle up and down the creek, cackling rails hide in the sedges behind it, red-winged blackbirds flute above the phalanxes of rushes on its banks: but the bittern makes more noise, especially toward evening during the nesting season, than all the other inhabitants of the swampy meadows except the frogs, whose voices he forever silences when he can. Frogs, legs and all, are his favorite delicacy.

CHAPTER XIX

THE FASTEST FLYERS, SWIMMERS, AND DIVERS

CANADA GOOSE—WILD DUCKS—HERRING GULL—LOON

Canada Goose

Length—From 1 yard to 43 inches.

Male and Female—Head and neck black, a broad white band running from eye to eye under the head; mantle over back and wings grayish brown, the edges of feathers lightest; breast gray, fading to soiled white underneath. Female paler; tail, bill, and feet black.

Range—North America at large; nests in northern parts of the United States and in the British possessions; winters southward to Mexico.

Season—Chiefly a spring and autumn migrant, north of Washington; although a few remain so late (December) and return so early (March) they may almost be said to be winter residents North as well as South. The most abundant and widely distributed of all our wild geese.

Heralded by a mellow *honk, honk,* from the leader of a flying wedge, on come the long-necked wild geese from their northern nesting grounds, and stream across the autumn sky so far above us that their large bodies appear

like two lines of dark dots describing the letter V. In spite of their height, which never seems as great as it actually is because of the goose's large size, one can distinctly hear the *honk* of the temporary captain—some heavy veteran—answered in clearer, deeper tones, as the birds pass above, by the rear guardsmen in the long array that moves with impressive unison across the clouds. Often the fanning of their wings is distinctly audible, too. The migration of all birds can but excite wonder and stir the imagination; but that of the wild goose embarked on a pilgrimage of several thousand miles, made often at night, but chiefly by broad daylight, attracts perhaps the most attention. Sometimes the two diverging lines come together into one, and a serpent seems to crawl with snake-like undulations across the sky; or, again, the flock in Indian file shoots straight as an arrow. It is as a bird of passage that one thinks of the goose, however well one knows that it remains resident in many places at least a part of the winter.

A slow drift down a slope of a mile or more, on almost motionless wings, brings them to the surface with majestic grace, and flying low until the precise spot is reached where they wish to rest, they settle on the water with a heavy splash. Usually they stop flying near sunset to feed with much noisy cackling on the eel-grass, sedges, roots of aquatic plants or on the wheat, corn, and other grain that has dropped among the stubble in the farmers' fields, for they are strict vegetarians.

Geese spend much more time on land than ducks do. By studying the habits of the common barnyard goose we learn many of the ways of its wild relations that nest too far north to be watched. Canada geese that have been

wounded by sportsmen in the fall, can be kept on a farm perfectly contented all winter; but when the honking flocks return from the South in March or April, they rarely resist "the call of the wild," and away they go toward their kin and freedom.

Wild Ducks

Birds that spend their summers for the most part north of the United States and travel past us faster than the fastest automobile racer or locomotive—and an hundred miles an hour is not an uncommon speed for ducks to fly—need have little to fear, one might suppose. But so mercilessly are they hunted whenever they stop to rest, that few birds are more timid.

River and pond ducks, that have the most delicious flavor because they feed on wild rice, celery, and other dainty fare, frequent sluggish streams and shallow ponds. There they tip up their bodies in a funny way to probe about the muddy bottoms, their heads stuck down under water, their tails and flat, webbed feet in the air directly above them, just as barnyard ducks stand on their heads. They like to dabble along the shores, too, and draw out roots, worms, seeds, and tiny shellfish imbedded in the banks. Of course they get a good deal of mud in their mouths, but their broad flat bills have strainers on the sides, and merely by shutting them tight, the mud and water are forced out of the gutters. After nightfall ducks seem especially active and noisy.

In every slough where mallards, blue- and green-winged teal, widgeons, black duck and pintails settle down to rest in autumn, gunners wait concealed in the sedges. Decoy-

ing the sociable birds by means of painted wooden images of ducks floating on the water near the blind, they commence the slaughter at daybreak. But ducks are of all targets the most difficult, perhaps, for the tyro to hit. On the slightest alarm they bound from the water on whistling wings and are off at a speed that only the most expert shot overtakes. No self-respecting sportsman would touch the little wood duck—the most beautiful member of its family group. It is as choicely colored and marked as the Chinese mandarin duck, and a possible possession for every one who has a country place with woods and water on it. Unlike its relatives, the wood duck nests in hollow trees and bird boxes and carries its ducklings to the water in its mouth as a cat carries its kittens.

The large group of sea and bay ducks contains the canvasback, red-head, and other vegetarian ducks, dear to the sportsman and epicure. These birds may, perhaps, be more familiar to some in butcher-shop windows, than in life. Enormous flocks once descended upon the Chesapeake Bay region. To Virginia and Maryland, therefore, hastened all the gunners in the East until the canvasback, at least, is even more rare in the sportsman's paradise than it is on the epicure's plate. Every kind of duck is now served up as canvasback, even impossible old squaws, the noisy black and white ducks that stay around northern feeding grounds until they are quite frozen over. Some sea ducks, which are fish eaters, have flesh too rank and oily for the table. They dive for their food, often to a great depth, pursuing and catching fish under water like the saw-billed mergansers or shelldrakes which form a distinct group. The surf scoters, or black coots, so abundant off the Atlantic coast in winter, dive constantly to feed on

mussels, clams, or scallops. Naturally such athletic birds are very tough.

With the exception of the wood duck, all ducks nest on the ground. Twigs, leaves, and grasses form the rude cradle for the eggs, and, as a final touch of devotion, the mother plucks feathers from her own soft breast for the eggs to lie in. When there is any work to be done the dandified drakes go off by themselves, leaving the entire care of raising the family to their mates. Then they moult and sometimes lose so many feathers they are unable to fly. But by the time the ducklings are well grown and strong of wing, the drake joins the family, one flock joins another, and the ducks begin their long journey southward. But very few people, even in Canada where many ducks nest, can ever hope to know them in their inaccessible swampy homes.

The Shoveler

Length—18 to 20 inches.

Male—Head and neck rusty, glossy bluish green; back brown, paler on the edges of the feathers, and black on lower back and tail; patches on sides of base of tail; lower neck, upper breast, and some wing feathers white; lower breast and underneath reddish chestnut; shoulders grayish blue; wing patch green. Bill longer than head, twice as wide at end as at base, and rounded over like a spoon; teeth at the sides in long, slender plates. Tail short, consisting of fourteen sharply pointed feathers. Feet small and red.

Female—Smaller, darker, and duller than male. Head and neck streaked with buff, brown, and black; throat

yellowish white; back dark olive brown, the feathers lighter on the edges; under parts yellowish brown indistinctly barred with dusky; wings much like male's, only less vivid. Immature birds have plumage intermediate between their parents; their shoulders are slaty gray and the wing patch shows little or no green.

Range—"Northern Hemisphere; in America more common in the interior; breeds regularly from Minnesota northward and locally as far south as Texas; not known to breed in the Atlantic states; winters from southern Illinois and Virginia southward to northern South America." (Chapman.)

Season—Winter visitor in the South; spring and autumn migrant north of Washington; more abundant in autumn migrations in the East.

However variable the plumage of this duck may be in the sexes and at different seasons, its strangely shaped bill at once identifies it, no other representatives of the spoonbill genus of ducks having found their way to North American waters. Apparently the shoveler is guided by touch rather than sight, as it pokes about on the muddy shores of ponds or tips up to probe in the shallow waters for the small shellfish, insects, roots of aquatic plants, and small fish it feeds on. It is not a strict vegetarian, however delicate and delicious its flesh may be at the proper season. There are many sportsmen who would not pass a shoveler to shoot a canvasback.

North of the United States, where these ducks chiefly have their summer home, we hear of the jaunty, particolored drake, gayly decked out for the nesting season,

when he is truly beautiful to behold, and charmingly attentive to his more sombre mate. By the time the autumn migration has brought them over our borders, however, he has cast off many of his fine feathers, together with his gallant manners, and closely resembles the duck in all but character. He is ever a selfish idler, while she attends to all the drudgery of making the nest in the marshy border of the lake; of incubating from six to fourteen pale greenish buff eggs during four weeks of the closest confinement; of caring for the large brood and teaching the ducklings all the family arts.

Shovelers are expert swimmers and divers, though they "tip up" rather than dive for food; they are good walkers also, when we see them in the cornfields, and almost as swift on the wing as a teal. *Took, took, took, took,* that answers as a love song and the expression of whatever passing emotion the ordinarily silent birds may voice, was likened by Nuttall to "a rattle, turned by small jerks in the hand."

Like most other ducks of this subfamily, the shoveler is not common in the northern Atlantic states. Salt water never attracts it; but, on the contrary, it rejoices in lakes, sluggish rivers and streams, isolated grass-grown ponds, and even puddles made by the rain. In the sloughs and lagoons of the lower Mississippi Valley it is still fairly common all winter, however much it is persecuted by the gunners.

"These birds migrate *across* the country to the western plains where they nest," said Chamberlain, "from North Dakota and Manitoba northward, ranging as far as Alaska." In such remote places, where the hand of the law rarely reaches the nefarious pot hunter, he happily finds the ducks in the very prime of toughness.

The Pintail

Length—Male 25 to 30 inches, according to development of tail, female 22 inches.

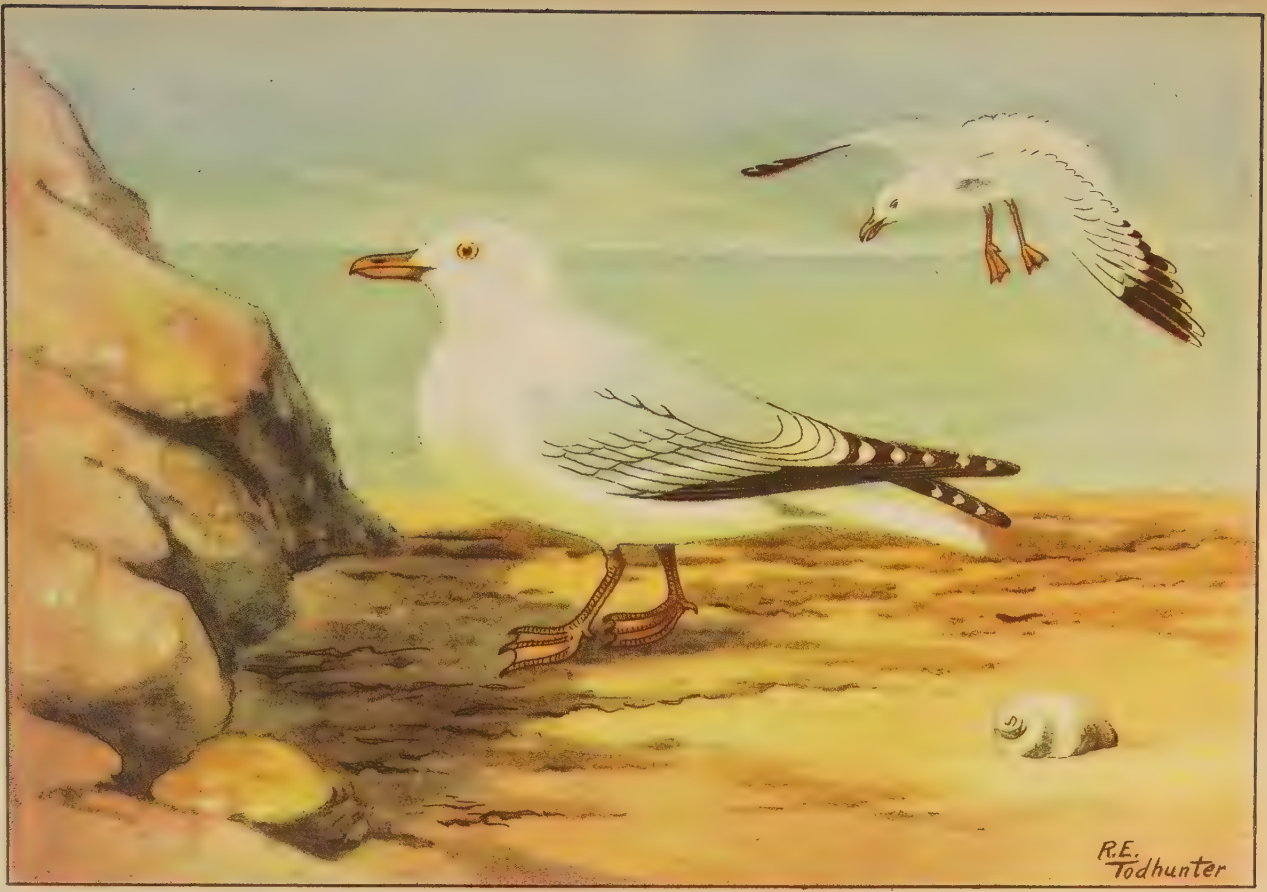
Male—Head and throat rich olive brown, glossed with green and purple; blackish on back of neck; two white lines, beginning at the crown, border the blackish space, and become lost in the white of the breast and under parts. Underneath faintly, the sides more strongly, and the back heavily marked with waving black lines; back darkest; shoulders black; wing coverts brownish gray, the greater ones tipped with reddish brown; speculum or wing patch purplish green; central tail feathers very long and greenish black. Bill and feet slate colored.

Female—Tail shorter, but with central feathers sharply pointed. Upper parts mottled gray and yellowish and dark brown; breast pale yellow brown freckled with dusky; whitish beneath, the sides marked with black and white; only traces of the speculum in green spots on brown area of wing; tail with oblique bars. In nesting plumage the drake resembles the female except that his wing markings remain unchanged.

Range—North America at large, nesting north of Illinois to the Arctic Ocean; winters from central part of the United States southward to Panama and West Indies.

Season—Chiefly a spring and autumn migrant, or more rarely a winter visitor, in the northern part of the United States; a winter resident in the South.

No one could possibly mistake the long-tailed drake in fall plumage for any other species; but the tyro who would



HERRING GULL

R.E. Todhunter

not confound his dusky mate with several other obscure looking ducks must take note of her lead-colored bill and legs, broad, sharply pointed tail feathers, and dusky under wing coverts. The pintails carry themselves with a stately elegance that faintly suggests the coming swan. Their necks, unusually long and slender for a duck; their well-poised heads and trim, long bodies, unlike the squat figure of some of their kindred; their sharp wings and pointed tails—these characteristics give them both dignity and grace in the air, on the land, or in the water, for they appear equally at home in the three elements.

But of such charms as they possess they are exceedingly chary. In the wet prairie lands and grass-grown shallow waters which they delight in, hunters find these birds the first to take alarm—troublesomely vigilant, noisy chatterers, with a very small bump of curiosity that discourages tolling or decoys; nervous and easily panic stricken. At the first crack of the gun they shoot upward in a confused, struggling mass that gives all too good a chance for a pot shot. If they had learned to scatter themselves in all directions, to dive under water or into the dense sedges when alarmed, as some ducks do, there would be many more pintails alive to-day; but usually they practise none of these protections. There are men living who recall the times, never to return, when ducks resorted literally by the million to the Kankakee and the Calumet regions; and pintails in countless multitudes swelled the hordes that thronged out of the North in the autumn migration. In spite of their enormous fertility, their strong, rapid flight, their swimming and diving powers, their shyness and readiness to take alarm—in spite of the lavish protection that nature has given them, and of their economic value to man—there are great tracts of

country where these once abundant game birds have been hunted to extinction.

From the West and the North sportsmen follow the ducks into the lower Mississippi Valley region and our Southern seaboard states, where the majority winter. Widgeons and black ducks often associate with them there. The canvasback, the red-head, the black duck, the teals and the mallard, while counted greater delicacies, by no means attract the exclusive attention of the pot hunter when pintails are in sight. Given a good cook and a young, fat, tender duck, even Macaulay's school-boy could tell the result.

It is an amusing sight to see a flock of drakes feeding in autumn, when they chiefly live apart by themselves. Tipping the fore part of their bodies downward while, with their long necks distended, they probe the muddy bottoms of the lake for the vegetable matter and low animal forms they feed upon, their long tails stand erect above the surface like so many bulrushes growing in the water. They seem able to stand on their heads in this fashion indefinitely; a spasmodic working of their feet in the air from time to time testifying only to the difficulty a bird may be having to loosen some much-desired root.

The Herring Gull

Length—24 to 25 inches.

Male and Female—In summer: Mantle over back and wings deep pearl gray, head, tail, and under parts white. Outer feathers of wings chiefly black, with rounded white spots near the tips. *In winter:* Similar to summer plumage, but with grayish streaks or blotches about the head and neck.

Young—Upper parts ashy brown; head and neck marked with buff, and back and wings margined and marked with the same color; outer feathers of wings brownish black, lacking round white spots; black or brownish tail feathers gradually fade to white.

Range—Nests from Minnesota and New England northward, especially about the St. Lawrence, Nova Scotia, Newfoundland, and Labrador. Winters from Bay of Fundy to West Indies and Lower California.

Season—Winter resident. Common from November until March.

As the robin is to the land birds, so is the herring gull to the sea fowl—overwhelmingly predominant during the winter in the Great Lakes and larger waterways of the interior, just as it is about the docks of our harbors, along our coasts, and very far out at sea. There are at least three things one never tires watching: the blaze of a wood fire, the breaking of waves on a beach, and the flight of a flock of gulls sailing about serenely on broad, strong wings—gliding and darting and skimming with a poetry of motion few birds can equal.

Not many years ago gulls became alarmingly scarce. Why? Because silly girls and women, to follow fashion, trimmed their hats with gull's wings until hundreds of thousands of these birds and their exquisite little cousins, the terns or sea swallows, had been slaughtered. Then some vigilant Audubon Societies said the massacre must stop and happily the law now says so, too. Paid keepers patrol some of the islands where gulls and terns nest, which is the reason why one may see ashy-brown young gulls

nowadays in almost every flock. When they mature, a pearl-gray mantle covers their backs and wings, and their breasts, heads, and tails become snowy white. Their coloring now suggests fogs and white-capped waves.

Why protect birds that are not fit for food and that kill no mice nor insects in the farmer's fields? is often asked. A wise man once said "the beautiful is as useful as the useful"; but the picturesque gulls are not preserved merely to enliven marine pictures and to please the eye of travelers. They fill the valuable office of scavengers of the sea. Lobsters and crabs, among many other creatures under the ocean, gulls, terns, and petrels, among many creatures over it, do for the water what the turkey buzzard does for the land—rid it of enormous quantities of refuse. When one watches hundreds of gulls following the garbage scows out of New York harbor, or sailing in the wake of an ocean liner a thousand miles or more away from land, to pick up the refuse thrown overboard from the ship's kitchen, one realizes the excellence of Dame Nature's housecleaning.

Gulls are greedy creatures. No sooner will one member of a flock swoop down upon a morsel of food, than a horde of hungry companions, in hot pursuit, chase after him to try to frighten him into dropping his dinner. With a harsh, laughing cry, *akak, kak, akak, kak, kak,* they wheel and float about a feeding ground for hours at a time.

And they fly incredibly far and fast. A flock that has followed an ocean greyhound all day will settle down to sleep at night "bedded" on the rolling water like ducks while "rocked in the cradle of the deep." After a rest that may last till dawn, they rise refreshed, fly in the direction of the vanished steamer, and actually overtake it with apparent ease in time to pick up the scraps from the break-

fast table. Reliable captains say the same birds follow a ship from our shores all the way across the Atlantic.

The Loon

Length—31 to 36 inches.

Male and Female—In summer: Upper parts glossy black, showing iridescent violet and green tints. Back and wings spotted and barred with white; white spaces lined with black on the neck marking off black bands like collars, and sides of breast streaked with black and white Breast and underneath white. Bill stout, straight, sharply pointed, and yellowish green. Legs, at rear of body, are short, buried, and feathered to heel joint. Tail short. Feet black and webbed. *In winter and immature specimens:* Upper parts blackish and feathers margined with grayish, not spotted with white. Underneath white with grayish wash at throat.

Range—Northern part of Northern Hemisphere. In North America breeds from the northern United States to Arctic Circle, and winters from the southern limit of its breeding range to the Gulf of Mexico.

Season—A wandering winter resident. Most common in the migrations from September to May, except in mountain lakes.

This largest and handsomest of the diving birds comes down to our latitude in winter, when its favorite inland lakes at the North begin to freeze over and the fish to fail, and wanders about far from the haunts of men along the seacoast or by the fresh waterways. Cautious, shy, fond

of solitude, it shifts about from place to place discouraging our acquaintance. By the time it reaches the United States in autumn—for the majority nest farther north—it has exchanged its rich, velvety black and white wedding garment for a more dingy suit, in which the immature specimens are also dressed. With strong, direct flight small companies of loons may be seen high overhead migrating southward to escape the ice that locks up their food; or a solitary bird, some fine morning, may cause us to look up to where a long-drawn, melancholy, uncanny scream seems to rend the very clouds. But the loon has also a soft and rather pleasing cry, to which Longfellow referred:

> . . . "The loon that *laughs* and flies
> Down to those reflected skies."

A mirror-like lake in the Adirondacks or White Mountains is ever a loon's idea of paradise.

Loons are remarkable divers and swimmers. The cartridge of the modern breech-loader gives no warning of a coming shot, as the old-fashioned flint-lock did; nevertheless, the loon, which is therefore literally quicker than a flash at diving, disappears nine times out of ten before the shot reaches the spot where the bird had been floating with apparent unconcern only a second before. Hell-diver and great northern diver are among its popular names. Certainly it appears to descend suddenly, when alarmed, to the nethermost regions. A vigorous swimmer under water, it will reappear far from where one might reasonably expect to see it arise. As its flesh is dark, tough, and unpalatable, the sportsman loses nothing of value except his temper. Sometimes young loons are eaten in camps where better

meat is scarce, and are even offered in large city markets where it isn't.

In spring, when the ice has broken up, a pair of loons retire to the shores of some lonely inland lake or river, and here on the ground they build a rude nest in a slight depression near enough to the water to glide off into it without touching their feet to the sand. In June two grayish olive brown eggs, spotted with umber brown, are hatched. The young are frequently seen on land as they go waddling from pond to pond. After the nesting season the parents separate and undergo a moult which sometimes leaves so few feathers on their bodies that they are unable to rise in the air. When on land they are at any time almost helpless and exceedingly awkward, using their wings and bill to assist their clumsy aquatic feet.

THE END

COLOR KEY

CONSPICUOUSLY BLACK

	PAGE		PAGE
Bronzed grackle	121	Purple martin	89
Cowbird	129	Red-winged blackbird	127
Crow	133	Rusty blackbird	122
Purple grackle	121		

CONSPICUOUSLY BLACK AND WHITE

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Bobolink	130	Snowflake	105
Downy woodpecker	164	Snowy heron	232
Herring gull	244	Towhee	102
Loon	247	White egret	232
Pintail	242	Yellow-bellied woodpecker	162
Red-headed woodpecker	160		

BLUE AND BLUISH BIRDS

Barn swallow	91	Cliff or Eaves swallow	93
Belted kingfisher	168	Great blue heron	228
Blue jay	135	Indigo bunting	98
Bluebird	21	Mourning dove	201

BIRDS CONSPICUOUSLY YELLOW AND ORANGE

Baltimore oriole	123	Redstart	55
Blackburnian warbler	63	Yellow-breasted chat	57
Goldfinch	115	Yellow-throated vireo	75
Maryland yellowthroat	58	Yellow warbler	65

BIRDS CONSPICUOUSLY RED

Cardinal	101	Scarlet tanager	83
Orchard oriole	123	Screech owl	174
Purple finch	117	Sparrow-hawk	184
Robin	24		

GREEN, GREENISH GRAY, OLIVE AND YELLOWISH OLIVE BIRDS

Clapper rail	226	Ruby-crowned kinglet	32
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Chestnut-sided warbler	63	Northern shrike	77
Chickadee	34	Passenger pigeon	203
Chimney swift	151	Phoebe	142
Cooper's hawk and the Sharp-shinned hawk	193	Red-breasted nuthatch	40
Coot	226	Semi-palmated or Ring-necked plover	215
Crested flycatcher	141	Spotted sandpiper	217
Junco	104	Tufted titmouse	37
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Chipping sparrow	109	Sora or Carolina rail	224
English sparrow	113	Swamp sparrow	108
Field sparrow	108	Tree sparrow	110
Flicker	157	Turkey vulture	196
Fox sparrow	105	Veery	30
House wren	44	Vesper sparrow	114
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